



The Physiologist

INSIDE

159th APS

Business Meeting

p. 207

The NIH Budget in the Post-Doubling Era

p. 226

NIH Announces National Commission on Digestive Diseases

p. 226

Guy Fogleman to Become FASEB Executive Director

p. 232

Good News and Bad News

Howard Garrison and Nina Bartholme

Office of Public Affairs
Federation of American Societies for Experimental Biology

It has been only three years since the doubling of the NIH budget, yet many voices are bemoaning a new funding crisis. What has happened? Bruce Bistran, President of the Federation of American Societies for Experimental Biology (FASEB), borrowing from the opening lines of Charles Dickens's classic *Tale of Two Cities*, characterized the situation as "the best of times and the worst of times." The NIH budget reached \$28.7 billion dollars in 2005, a level unimaginable 10 years ago. But individual investigators submitting grant applications are encountering very low paylines (often under the 15th percentile), and there is growing concern about the future. Why does there seem to be trouble when the future looked so bright? And what can we do to change this situation?

What Happened?

The good news is that in response to the desire of the American people for longer lives and better health, Congress increased the budget of the NIH from \$13.6 billion in 1998 to \$27.2 billion in 2003 (Figure 1). This provided an extraordinary increase in research resources, and the funding for R01 grants rose significantly during the same period. R01 funding expanded from \$5.7 billion in 1998 to \$9.7 billion in 2003 (Figure 2).

A large fraction of the increased funding went to boost the size of the R01

grants, which had been held down during the lean years of the early 1990s. The size of the average R01 grant rose from \$243.3 thousand in 1998 to \$339.1 thousand in 2003, an increase of 39.4% (Figure 3). The number of R01 grants also grew during the same period, but at a lower rate of increase.

The increase in funding for biomedical research gave rise to an enthusiastic response from investigators and research institutions. New discoveries pushed back the frontiers of science and inspired scientists to think about new opportunities, as advances in one field gave rise to new possibilities in others. Both investigators and their institutions saw the promise and responded accordingly; research institutions constructed new facilities and laboratories and scientists developed new proposals.

These developments, while occurring at an expedited pace, took several years to unfold. While the doubling of the NIH budget took place from 1998 through 2003, the largest increase in the number of R01 applications took place in 2004, the year after the doubling was completed (Figure 4).

From a scientific perspective, the lag time between the increase in NIH funding and the flowering of new ideas for additional research was understandable and predictable. What was not foreseeable, however, was that the NIH budget would be effectively frozen after the completion of the doubling. This is

(continued on page 203)

The Physiologist

Contents

Good News and Bad News <i>Howard Garrison and Nina Bartholme</i>	201	Public Affairs The NIH Budget in the Post-doubling Era	226
Membership New Regular Members	205	NIH Announces National Commission on Digestive Diseases	226
New Student Members	206	APS Opposes Random Source Animal Restrictions	226
New Affiliate Member	206		
Recently Deceased Members	206		
159th APS Business Meeting	207	Positions Available	228
Education Graduate Students and Postdoctoral Fellows Receive tium Suden/Hellebrandt Professional Opportunity Awards	216	People & Places Benos Earns President's Award for Excellence in Teaching	232
Undergraduate Students Receive David S. Bruce Awards for Excellence in Undergraduate Research	217	Guy Fogleman to Become FASEB Executive Director	232
Luncheon and Presentations Honor APS Summer Research Teachers and Hosts	218	Gunter-Smith Taking Provost Position	232
Undergraduate Research Highlighted at Special EB Session	219	Guggino New Director of Physiology at Johns Hopkins Medicine	232
2006-2007 Porter Physiology Fellows Announced	219	The Physiological Society (UK) Appoints New Chief Executive	233
San Francisco Science Teachers and Students Explore Physiology at EB 2006	220	The Physiological Society (UK) Elects Professor Ole Petersen, FRS as President	233
Navar Receives Schmidt-Nielsen Distinguished Mentor and Scientist Award	221	Phillips Research Professor at Stem Cell Laboratory	233
New Program Improves Trainees' Writing and Reviewing Skills	222	Senior Physiologists' News	234
2006 APS/NIDDK Minority Travel Fellows Attend Experimental Biology in San Francisco	223	Book Review	235
Undergraduate Summer Research Fellows Attend EB Teaching Section Awards	225	Books Received	235
	225	The Wine Wizard	236
		Scientific Meetings and Congresses	237
		APS Membership Application	239

Published bimonthly and
distributed by
The American Physiological
Society

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

Dale J. Benos
President
Douglas C. Eaton
Past President
Hannah V. Carey
President-Elect
Martin Frank

Editor and Executive Director

Councillors

Susan M. Barman, James W. Hicks
Irving G. Joshua,
Carole M. Liedtke,
Thomas E. Lohmeier,
Gary C. Sieck, Dee U. Silverthorn,
J. Michael Wyss, Irving H. Zucker

Ex Officio

Kenneth Baldwin,
Kim E. Barrett,
Robert G. Carroll,
Curt D. Sigmund,
Peter D. Wagner

Publications Committee: *Chair:*
Kim E. Barrett; *Members:* Eileen
M. Hasser, Martin F. Kagnoff,
Peggy Mason, Ronald L. Terjung.
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
(print only): individuals \$60.00;
institutions \$95.00. Nonmembers
in Canada: individuals \$65.00;
institutions \$100.00. Nonmembers
elsewhere: individuals \$70.00;
institutions \$105.00. 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 online version is available free
to all worldwide.

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

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

Headquarters phone: 301-634-7118

Fax: 301-634-7241

Email: info@the-aps.org

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

Printed in the USA

the bad news; there was no “soft landing” and no return to the historic rates of growth (approximately 8% per year) that enabled NIH to keep ahead of inflation, maintain on-going research and fund new projects.

The rising cost of biomedical research is not a trivial problem, and in times of limited budget growth it severely impacts the funding of new grants. According to the Biomedical Research and Development Price Index (BRDPI), the cost of medical research rose by 3.6% in 2004, by 5.5% in 2005 and is expected

to increase by 4.1% in 2006. In the meantime, the NIH budget rose by 3.2%, 2.2% and -0.2% in the same years. Since the end of the budget doubling in 2003, the increase in NIH funding has been insufficient to keep pace with the rising cost of biomedical research.

But researchers, spurred on by the potential unleashed by the doubling of the NIH budget, responded to the call for more biomedical research. But the larger number of grant proposals arrived at a time of flat funding. Under these circumstances, success rates (the

number of total applications funded divided by the total the number of applications submitted) fell as more proposals competed for resources that were being eroded by rising costs. Success rates for R01 applications, which rose to over 30 percent in the middle of the doubling period, fell well below that level in 2004 and 2005 when applications began to rise and funding remained flat (Figure 5).

What Can We Do About It?

The key is to return NIH to a level of steady growth, and we must convince our elected leaders that additional funding for medical research must be a national priority. We did it once before, and we can certainly do it again.

We face new challenges, however, that we did not encounter in the 1990s. For one thing, we no longer have a budget surplus, and the budget deficit has drawn many supporters of research into the camp of the fiscal conservatives. In addition, increased federal spending on homeland security, disaster relief, and defense has constrained budgets in all other areas. Biomedical research is not the only worthy cause seeking additional resources. Compounding these difficulties is the belief among some in Congress and the Administration that biomedical research has already been “taken care of.” Our success in the 1998 to 2003 period is being used as a rationale for curbing the growth of the NIH.

Elected representatives, looking for some reason to say “no” to requests for additional resources, ask for evidence that the funding has benefited the American public and they are demanding proof that more funding is needed.

Our case, therefore, needs to be made more effectively. We need to teach a new generation of elected officials about the achievements made possible by our prior investment in research; we must inform them of benefits yet to come. In the face of increased competition for scarce federal resources, scientists need to come out of their clinics and labs and help educate the nation about the value of scientific research.

In the 1990s, the leaders of the scientific societies, in col-

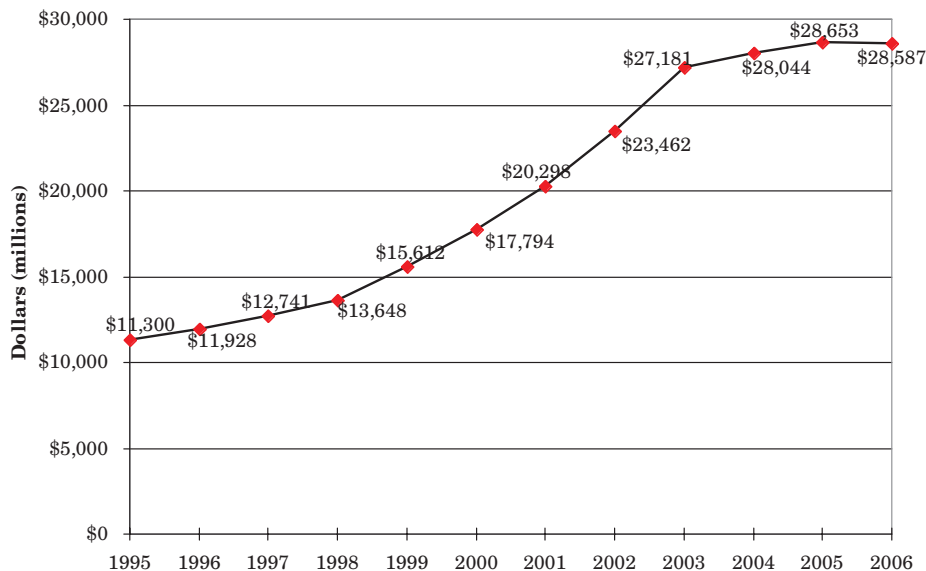
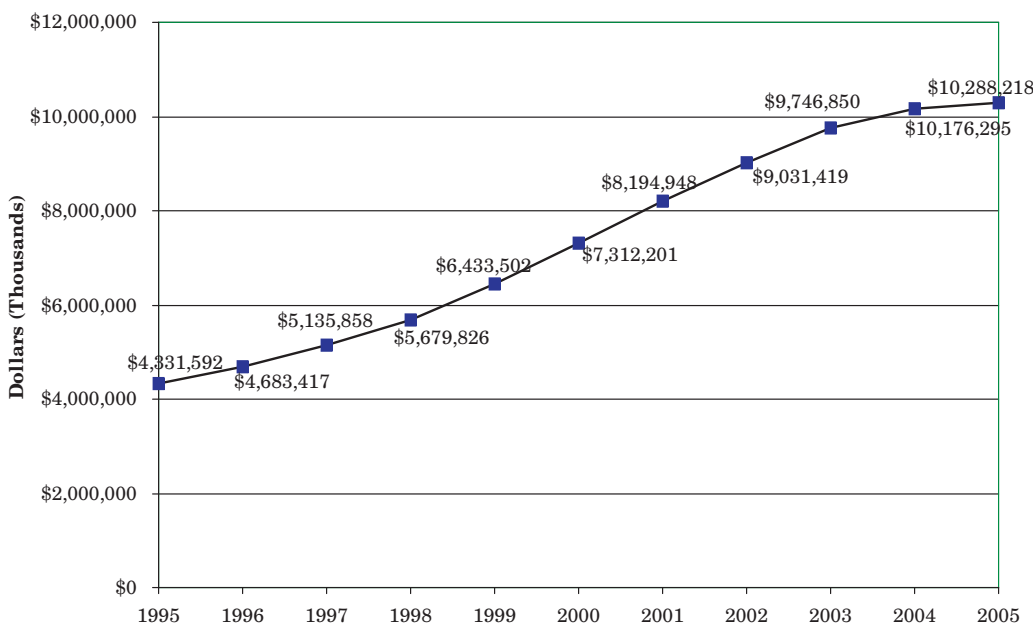


Figure 2: Funding for R01 and R29 Grants: FY1995-2005



laboration with government affairs professionals, were able to make the case for increased federal research funding. Now, with the increased competition and new obstacles before us, the tactics of the past are insufficient. We need to mobilize the energies and talents of scientists, patients, and other citizens in districts all across the nation. Members of Congress need to hear from their own constituents. As former Speaker of the House, Tip O'Neill, Jr., said, "all politics is local." Elected officials in every state

need to hear that biomedical research has produced dramatic changes in the health and quality of life; and we must let people know that this is just the beginning. Standing on the threshold of even more exciting new discoveries, we must impress upon our elected leadership that our investment in infrastructure and training must not be squandered.

To do this, and to do it well, we need your help. With tools like FASEB's E-Action Alerts and the *Washington Update*, you can learn about the issues

and help raise funding for NIH and other biomedical research. To sign up for the E-Action Alerts go to <http://capwiz.com/faseb/mlm/signup/> and for the *Washington Update*, go to http://lists.faseb.org/mailman/listinfo/faseb_washington_update. APS's Legislative Action Center (<http://www.the-aps.org/pa/action/index.htm>) and FASEB's Legislative Action Center (<http://capwiz.com/faseb/home/>) have many resources available for writing to Congress and contacting your local media. Also try APS's Advocacy

Figure 3: Average Size of R01 Grants: FY1995-2007

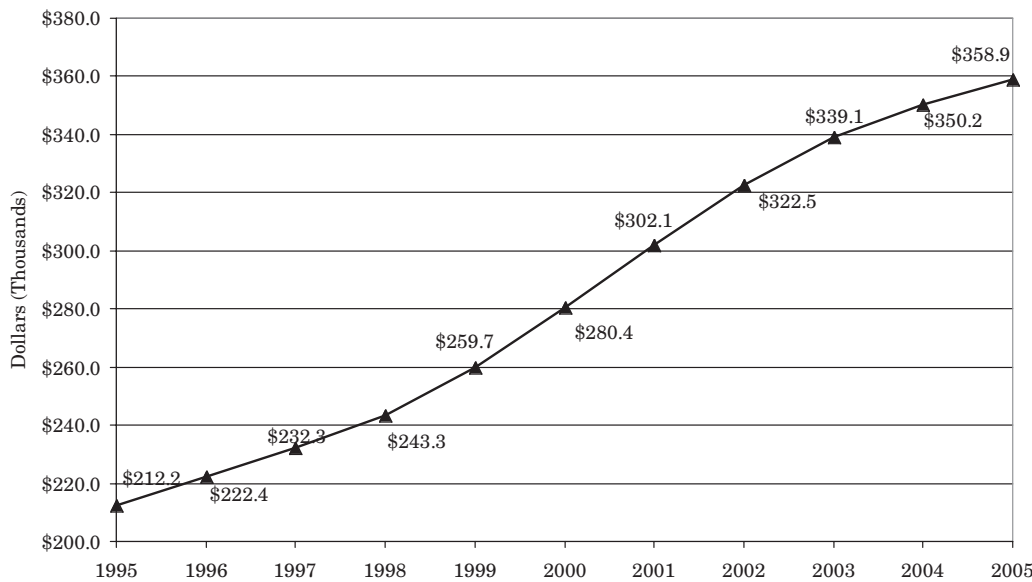


Figure 4: Number of R01 Grant Applications, FY1995-2005

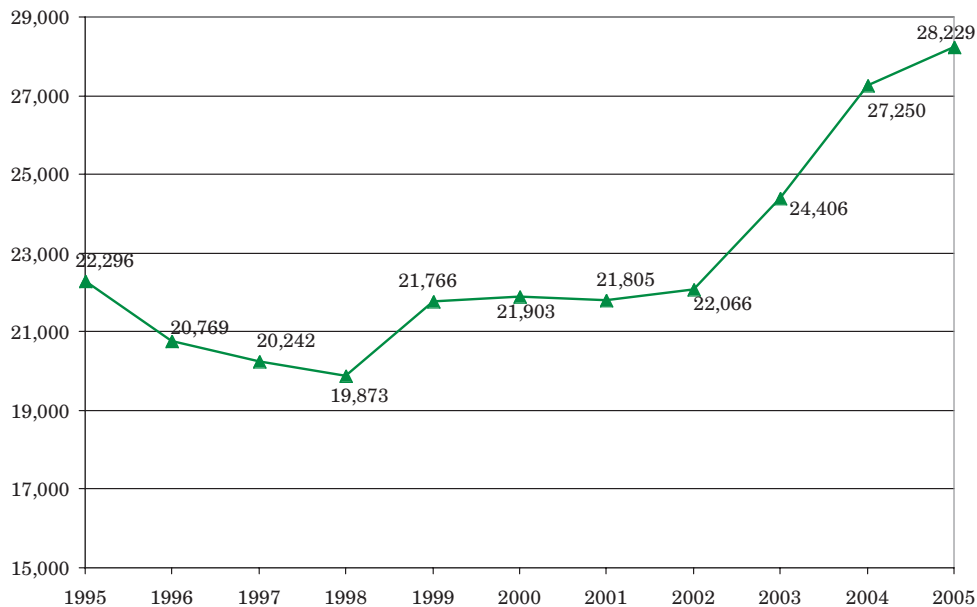
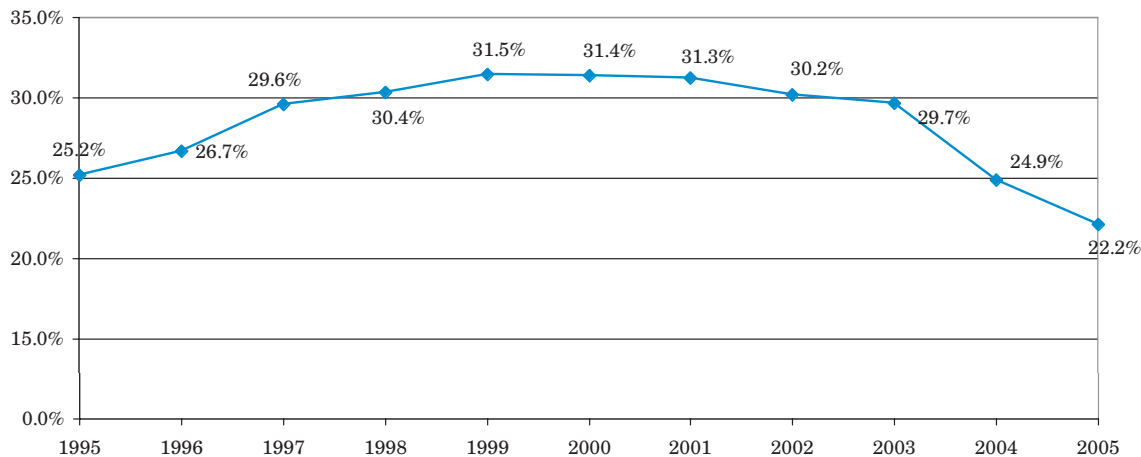


Figure 5: Success Rates For Competing R01/R29 Grants: FY1995-2005



Resource Kit website (<http://www.the-aps.org/pa/action/advocate/advocate.htm>) for more information on how you can become involved on federal, state and local levels.

For tips and talking points for contacting members of Congress, try APS's E-

Sheet: Your Guide to Meeting with Congress, http://www.the-aps.org/pa/action/congressional_meeting_e.htm, and Communicating with Congress at http://www.the-aps.org/pa/action/communicating_congress.htm. For links to other resources with advice on advocacy

biomedical research. Speak to your friends and neighbors; let them know what is at stake. Together, we can make a difference. ❖

use FASEB's Communicating Science webpage at <http://opa.faseb.org/pages/PolicyIssues/comm-science.htm>.

To learn more about biomedical and funding issues go to <http://opa.faseb.org/pages/Advocacy/> and <http://www.the-aps.org/pa/action/index.htm>. Arm yourself with this information and campaign for funding in support of

Membership

New Regular Members

*Transferred from Student Membership

Charles Edward Alpers

Univ. of Washington

Rebecca L. Bertrand

Univ. of Nevada

Ismaeel Mohammed Bin-Jaliah*

King Khalid University, Saudi Arabia

William Todd Cade*

Washington Univ., MO

Michael Keith Connor*

York Univ., ON, Canada

Melissa Ann Foltz Daggett

Missouri Western State Univ., MO

Min Du

Univ. of Wyoming

Carsten Ehrhardt

Univ. of Dublin Trinity College, Ireland

Marc Francaux

Univ. of Catholique, Louvain, Belgium

Madlyn Irene Frisard

VA Polytechnic Inst./State Univ., VA

Kimikazu Hamano

Yamaguchi Univ., Japan

Matthew P. Harber*

Ball State Univ., IN

Jan-Peter Hildebrandt

Univ. of Greifswald, Germany

Takashi Ichinose

Waseda Univ., Japan

Rajiv Janardhanan

Medical College of Georgia

Shane B. Kanatous*

Colorado State Univ.

John Y. Kao

Univ. of Michigan

Andras Kapus

St. Michael's Hospital, ON, Canada

Jacob L Krans*

Cornell Univ., NY

Timothy Eric Lindley*

Univ. of Iowa Hospitals

Yamaya Mutsuo

Tohoku Univ., Japan

Qi Pang

Shandong Provincial Hospital, China

Andrew Resnick

Case Western Reserve Sch. Med., OH

Raymond F. Reynolds

Inst. Neurology, UK

Le Shen

Univ. of Chicago, IL

Krishna V. Shenoy

Stanford Univ., CA

Bing-Wei Sun

Univ. of Western Ontario, Canada

Osamu Suzuki

Natl. Inst. Biomed. Innovation, Japan

Terry T. Takahashi

Univ. of Oregon

Marcin Ufnal

Medical Univ., Warsaw, Poland

Yu-Feng Wang

Univ. of California, Riverside

Frank Werblin

Univ. of California, Berkeley

Dmitriy A. Yablonskiy

Washington Univ., MO

Mustafa Yildiz

Sakarya Univ., Turkey

Lawrence H. Young

Yale Univ., CT

Asad Zeidan

Univ. of Western Ontario, Canada

New Student Members

Maomi M. Abrams
Univ. of Alabama, Birmingham

Tyler Barker
Oregon State Univ.

Shelton Charles
Loma Linda Univ., CA

Sarah C. Clayton
Univ. of Nebraska Medical Ctr.

Robert De Bruijn
Mid-Sweden Univ.

Louise Deldicque
Univ. Catholique Louvain, Belgium

Christopher V. DeSimon
SUNY, Buffalo

Asam Ejaz
Tufts Univ., MA

A. Esechie
Univ. of Texas Med. Branch

Lynda Evans
Univ. of Alabama, Birmingham

Kelly Flock
Seton Hall Univ., NJ

Brian Glancy
Arizona State Univ.

Connie Grobe
Univ. of Florida

Bakken B. Hartman
Univ. of Wyoming

Eric Ispanovic
York Univ., Canada

Kara L. Kelly
Ohio State Univ.

Nihal Koc
Istanbul Univ., Turkey

Natasha Lugo-Escobar
Univ. of Puerto Rico

Pradeep Malreddy
Kansas State Univ.

Xiaoqing Mao
Univ. of Missouri, Columbia

Paulo Jose Martins
Univ. Fed Sao Paulo Brazil

Zaira Mateo
Ponce School of Med., Puerto Rico

Fiona McBryde
Univ. of Auckland, New Zealand

Raissa Menendez-Delmestre
Univ. of Puerto Rico

Shankar Munusamy
Univ. of Arkansas

Andrew Murton
Univ. of Nottingham, UK

Djordje Nikolic
Princeton Univ., NJ

Luke Norton
Univ. of Nottingham

Stacy Porvasnik
Univ. of Florida

Ana Rodriguez-Zayas
Univ. of Puerto Rico, Med. Sciences

Adeel Safdar
McMaster Univ., Canada

Julie Schwartz
St. Louis Univ., MO

Qingwu Shen
Univ. of Wyoming

Yun Shi
Univ. of Texas, San Antonio

Jill A. Slater
Wayne State Univ., MI

Kristin Stanford
Univ. of California, San Diego

Jennifer E. Throne
Univ. of Arizona

Lukmanee Tradtrantip
Mahidol Univ., Thailand

Kathryn Zuj
Univ. of Waterloo, Canada

New Affiliate Member

Sarah Marie Umphress
Florida Memorial Univ.

Recently Deceased Members

Francis L. Able
Columbia, SC

Marjorie B. Zucker
New York, NY

Minority Travel Awards Available

The APS, with support from NIDDK and NIGMS, is offering travel awards for under-represented minorities (i.e., African Americans, Hispanics, Native Americans, & Pacific Islanders) who are US citizens or permanent residents, to attend the APS Conference: Physiological Genomics and Proteomics of Lung Disease, being held in Fort Lauderdale, FL from November 2-5, 2006.

The specific intent of this award is to increase participa-

tion of pre- and postdoctoral minority students in the physiological sciences. The awards are open to graduate students, postdoctoral students, and advanced undergraduate students. Students in the APS Porter Development Program, as well as minority faculty are encouraged to apply. This award covers registration, airfare, and reimbursement for ground transportation, lodging and meals.

Application deadline:

August 23, 2006

Application & Information:

<http://www.the-aps.org/meetings/aps/ftlauderdale/niddk.pdf>

Questions:

Contact Brooke Bruthers,
Award Coordinator.
Email: bbruthers@the-aps.org;
Tel: 301.634.7226

Time: 5:45 PM, Tuesday, April 4, 2006
Place: San Francisco, CA

I. Call to Order

The meeting was called to order at 5:48 PM by **President Douglas C. Eaton**, who welcomed the members to the 159th Business Meeting of the American Physiological Society. A booklet containing the agenda and a listing of all the APS award recipients was distributed.



APS President Douglas C. Eaton

II. Election of Officers

Executive Director Martin Frank announced the results of the election. The election was conducted via an online ballot. The new President-elect is **Hannah V. Carey**, University of Wisconsin, School of Veterinary Medicine, (April 6, 2006–May 2, 2007). The three newly elected Councillors are **James W. Hicks**, University of California, Irvine; **Dee U. Silverthorn**, University of Texas, Austin; and **J. Michael Wyss**, University of Alabama, Birmingham (April 6, 2006–April 22, 2009). They are replacing Helen Raybould and Jeff Sands, who are completing three-year terms on Council. The newly elected Councillors will serve a three-year term. All newly elected officers will assume office at the close of the Annual Meeting. Eaton said that 26.6% (1863) of the membership voted in the election.

IV. State of the Society

President Eaton addressed the membership and spoke on the state of the Society. He started by reviewing the mission of APS—*APS promotes discovery, disseminates knowledge, and advances education in physiology.*

Strategic Planning

Eaton reported that the Council, with the assistance of committee and section chairs, and APS staff, has developed a new Strategic Plan. APS held its first strategic plan meeting in 1992, and then the next meeting was held in 2000.

To prepare for this new strategic plan, the Society conducted a membership survey in the spring of 2005. Over 1,750 members responded to the survey, providing Council with the necessary data to draft a new strategic plan. After receiving the survey responses, Council then held two strategic planning meetings; the first was in November 2005, at which a first draft of the plan was written. A second meeting was held February 23-24, 2006, at which time the draft plan was finalized.

The new Strategic Plan has five major directions. Eaton said that the overarching goal of the Strategic Plan is to position physiology as a central and critical biomedical discipline and strengthen its relationships with the other life sciences.

Direction 1

The first direction in the plan is to make APS a leader in advancing the life sciences that investigate biological function. Eaton said the strategies that will be used to achieve this direction will include making the journals stronger and the premier place to publish; and to develop the discipline of physiology as a whole. The Society will also evaluate and redesign its meetings and conferences programs. Eaton said that the EB meetings still offer a strong scientific program and are financially successful, but many of the Society's conferences have not been financially successful. A task force will be created to evaluate the conference program, and a task force will be created to determine ways to further strengthen the EB meetings; both task forces will make recommendations to Council to improve both programs. He said that APS will also cultivate new partnerships with other international societies. APS will make better use of contemporary technology to create resources that both members and non-members can access and use to promote physiology.

Direction 2

The second direction is that APS will enhance the future of the discipline of physiology, ensuring that the next generation of physiologists are supported through all stages of their careers. One of the objects of this direction is ensure

that there are future physiologists. One way to achieve this is to increase the visibility of physiology in grades K-12. The Society will work through grass roots organizations to accomplish this objective.

Direction 3

The third direction is that APS will drive the understanding and appreciation for physiology as a discipline, and strengthen public and private support for scientific research. Eaton said that the current state of funding for biomedical research is not good. APS has to improve its advocacy for research funding. The Society must also increase the number of APS representatives on the various FASEB committees.

Direction 4

The fourth direction is that APS will be dynamic and relevant to an increasingly diverse and global membership. Eaton said that APS should have a diverse membership, and should also continually assess the needs of that membership to be able to support them in the areas where they need the most assistance. APS will begin to more vigorously use contemporary methods of technology to promote physiology to diverse groups in order to increase its membership. A task force will be created to evaluate the Society's current web/IT programs and will report its findings to Council.

Eaton said there is a need to attract a broader group of scientists and educate them to the fact that what they are doing is physiology. We also have to reach out to the international community. He said that at this meeting (EB06) a new exchange program with The Physiological Society (TPS) was initiated. TPS organized a symposium at EB, and APS organized a session at their annual meeting, July 5-7, 2006.

Direction 5

The fifth direction is that APS will be a mission-directed, adaptable, and fiscally sound organization. Eaton said that "fiscally sound" is the relevant point of this direction. This does not relate to the current financial state of the Society, but concerns the financial future of the Society. APS depends heavily on revenue from its publications; therefore it is important that the Society find other streams of revenue to supplement that income. Council will be asking all committees and sections to try to generate new ideas for alternate sources of revenue, and will also ask the sections to try to obtain outside financial support

for their distinguished lectureships. The objective is to be able to broaden the Society's programs through new streams of revenue.

Eaton said that the Society's governance structure will also be examined. The Long Range Planning Committee will be charged with this task.

The new Strategic Plan will be available on the APS web site, and will also be published in a future issue of *The Physiologist*. Eaton said that he would like to receive ideas and comments from the APS membership on the Strategic Plan.

Scientific Meetings

Eaton said approximately 6,000 physiologists attended the IUPS Congress that APS hosted in 2005. This meeting was a financial and scientific success.

Future Meetings

The Experimental Biology 2007 will be in Washington, DC. Because of the location, Eaton said he would like all members to contact their elected representatives in hopes of scheduling a meeting with them while they are in Washington, DC attending EB07.

Publications

Eaton reported that the Society's journals are doing well. The journals have had a long history of excellence and innovation, such as being online since 1994; having one of the first online systems for manuscript submission and review; having journal content available online from 1898 to the present; and free access to articles 12 months after the date of publication. Eaton reported that the Impact Factor for the journals is increasing, as well as the readership and submissions. The APS Publications department has developed a poster about ethical issues in publishing; these posters are available free-of-charge from APS.

Eaton said that the Society is continuing to respond to the NIH Public Access Plan. NIH has requested that all NIH-funded research manuscripts be submitted to PubMedCentral (PMC) in order to create a permanent archive of NIH funded research, and to provide the public with access to NIH funded research. APS has modified its copyright to allow authors to provide a copy of the approved manuscript to NIH, but NIH must abide by the 12 month embargo period.

Eaton said that group of scientific journal publishers sent a "Linking Proposal" to NIH. Under this proposal,

the NIH would be provided online access to articles on the publishers' websites using the existing system of links from abstracts that are indexed on NIH's Medline. This "Linking Proposal" would ensure integrity of the papers and would respect the publishers' embargo policy.

Public Affairs

Eaton said that the Society is coordinating efforts with FASEB and the Association of American Medical Colleges (AAMC) to try to improve funding opportunities for biomedical research. He said that the APS membership could help by communicating with their elected officials that the proposed federal budget would undo many of the advances made through the doubling of the NIH budget.

Eaton reported that APS has published a resource book for understanding animal welfare issues. The publication—*APS Resource Book for the Design of Animal Exercise Protocols*—is available through the APS store.

Education

Eaton reported that APS continues to promote discovery, disseminate knowledge, and advance education in physiology through programs such as: Porter Physiology Development Program, the NIDDK Minority Travel Awards, Explorations in Biomedicine, and Frontiers in Physiology. A new program has been instituted—Professional Skills Development for Minority Students in Biomedicine. This is an online interactive tool that will help trainees develop professional skills. It will be available on the APS website in early 2007.

Physiology Understanding Week

Eaton said that APS tested a pilot program in the fall 2005, and it was met with a great deal of enthusiasm. He said that this new program will help to get people in the pipeline early enabling us to have appropriate membership in the future.

APS Supports Its Membership

Eaton said that Hurricane Katrina created an immediate financial need for many APS members that the Society tried to help to minimize through the Katrina Fund. It is important to remember that there are still many problems remaining, such as rebuilding labs, relocating trainees, etc. APS will try to continue to help with these issues as the opportunities present themselves.

V. Report on Membership

A. Summary of the Membership Status

President-Elect Dale J. Benos reported on the status of the Society membership. As of February 9, 2006, the current membership of the Society is 9,671, of which 7,286 are regular members, 34 are honorary members, 1,133 are emeritus members, 17 are affiliate members, and 1,201 are student members. The Society also has 23 Sustaining members.

B. Deaths Reported Since

the Last Meeting

Benos read the names of those members whose deaths had been reported since the last meeting. The membership stood and observed a moment of silence in tribute to their deceased colleagues.

VI. Awards and Presentations

Eaton recognized three awardees that received their awards earlier in the EB meeting: the Walter B. Cannon Memorial Award Lecturer was Jo Rae Wright; the Henry Pickering Bowditch awardee was Ulrich Hans Von Andrian, and the Bodil Schmidt-Nielsen Distinguished Mentor & Scientist Lecture awardee was L. Gabriel Navar. *A. Ray G. Dags Award*

Ray G. Dags was the APS Executive Secretary-Treasurer from 1956 until his retirement in 1972. In tribute to his devotion to the Society, the Ray G. Dags Award was established, and is given annually to a physiologist for distinguished service to the Society and to the science of physiology. The 2006 Dags Awardee is Allen W. Cowley, Jr., Medical College of Wisconsin.

Cowley has been a distinguished leader in physiological research and has provided outstanding service to the profession of physiology and to the American Physiological Society. He has been an active member of the APS since 1972, serving as a Councillor for five years, and Chairman of the Water and Electrolyte Homeostasis Section. From 1997 to 1999 he served on the Executive Committee as President-elect, President, and Past-President of the APS. During his tenure, he helped create the research area of physiological genomics as a result of a workshop hosted by APS at the Cold Spring Harbor Laboratories. He helped launch a new APS journal, *Physiological Genomics*, becoming its second editor-in-chief in 2004. Cowley served as the President of the International Union of Physiological



APS President Douglas C. Eaton presents Allen W. Cowley, Jr. with the Ray G. Dags Award.



APS President Douglas C. Eaton presents Camillo Di Giulio with the Orr E. Reynolds Award.

Sciences (IUPS) from 2001-2005. As IUPS President, he spearheaded the revision of the commission structure of the IUPS, making the commissions more responsive to the needs of the physiological community.

Cowley has served as the President of the Association of Chairs of Departments of Physiology, and served on the Council for High Blood Pressure Research of American Heart Association Executive Committee as Vice-Chairman, Chairman and Past-Chairman. He has also served on a number of NIH study sections, most recently as a member of the National Heart, Lung, and Blood Advisory Council. He has also served as an Associate Editor on more than 10 editorial boards, including four journals of the APS.

Cowley is the director of the NIH Specialized Center for Hypertension Research at the Medical College of Wisconsin, which emphasizes the search for genes responsible for high blood pressure. He directs the NIH Program "Blood Pressure-Determinants and Controllers," now in its 25th year of continuous funding. He is the director of an NIH training grant in high blood pressure research and, throughout his career, has trained more than 30 post-doctoral fellows and students. He also co-directs an NIH Program of Genomic Applications (PGA) for the development of genetic model organisms that will link genes to function.

Cowley has been the recipient of many awards and honors, including the Distinguished Achievement Award of the Scientific Councils of the American Heart Association in 1996, the Novartis

Award from the Council for High Blood Pressure Research of the American Heart Association in 1997, the 1996 Ernest H. Starling Award and Distinguished Lectureship of the APS Water and Electrolyte Homeostasis Section, and was the recipient of the Walter B. Cannon Award of the APS in 2002. Cowley has authored more than 200 publications and has contributed chapters to more than 30 books.

In accepting the Ray G. Dags Award, Cowley said that he "thanks the Society and I am enormously honored by this, having been around long enough to know what this awards means. This society has been the heart of everything I do. I am a physiologist, and this truly is an integrative science. It is an enormous pleasure to come every year and interact with other physiologists. The most impressive part of the science is the scientists. It is very fulfilling to be recognized by your peers."

B. Arthur C. Guyton Teacher of the Year Award

The Arthur C. Guyton Teacher of the Year Award was established in 1993 by the Teaching of Physiology Section and is supported by the W.B. Saunders Company, publisher of Guyton's *Textbook on Medical Physiology*, used to educate generations of medical and physiology students. The Arthur C. Guyton Physiology Educator of the Year Award is selected by the Teaching Section and is presented to an APS member who is a full-time faculty member at an accredited college or university. The Selection Committee selects a candidate for the Award who demonstrates evidence of: 1)

excellence in classroom teaching over a number of years at undergraduate, graduate, or professional level; 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. This year's selection committee was chaired by Maureen Burton. The APS and the Teaching of Physiology Section thanked Elsevier for providing the funding for this award.

Daniel Richardson received his PhD in 1969 from Indiana University Medical Center. He began his career as Professor at the University of Kentucky, Department of Physiology in 1970 and today continues to teach. Richardson has had an illustrious career and extensive list of accomplishments in microcirculatory research, training of students and teaching. A striking and recurring theme that is noticed in his portfolio is his perpetual desire and natural ability to serve others by enabling them to learn. For this reason, he is held in high esteem by students and colleagues alike. He has taught, as well as developed, courses for students from third grade through degreed academicians. His service extends from the local through international level and is not limited to teaching but also includes numerous publications regarding effective teaching techniques. Richardson's accomplishments and accolades attest to his dedication in promoting and broadening the future of physiology education. Richardson was instrumental in creating this award during his tenure as Chair of the Teaching Section of the APS.



APS President Douglas C. Eaton and Susan Gunst, Chair, APS Respiration Section, present Deborah A. Quinn with the Giles F. Filley Memorial Award.

C. Orr E. Reynolds Award

The Orr Reynolds Award, established in 1985 in honor of the second Executive Secretary Treasurer, is presented for the best historical article submitted by a member of the Society. Members may receive the award only once, and those members who have advanced degrees in the history of science or medicine are not eligible.

The recipients receive \$500 and expenses to attend the spring meeting of the Society. The 2006 Reynolds Awardee is Camillo Di Giulio, University of Chieti, Italy, for his article entitled "Angelo Mosso and Muscular Fatigue 116 Years After the First Congress of Physiologists."

In accepting his award, Di Giulio said: "I want to thank APS for this award. I gave this talk in San Diego last year,

and it is a great honor to be here. The subject of this paper was a great physiological scientist. I believe it is important to teach students the history of the discipline." He also thanked APS member Charles Tipton for his constant encouragement.

D. Giles F. Filley Memorial Awards

As a result of a bequest from the family of Giles F. Filley, a memorial fund was established in 1993 to recognize excellence in respiratory physiology and medicine. Two annual awards of \$20,000 are made to investigators who hold an academic rank no higher than assistant professor and are pursuing research in respiratory physiology and medicine. Awards are made to APS members working in the United States, who have demonstrated outstanding promise

based on their research program. This year the Society is pleased to recognize the promise of Ryan W. Bavis, Bates College, and Deborah A. Quinn, Massachusetts General Hospital. Susan Gunst, Chair, APS Respiration Section, and Doug Eaton presented the awards to the recipients.

E. Lazaro J. Mandel Young Investigator Award

As a result of a bequest from the wife of Lazaro J. Mandel, a memorial fund was established in 1999 to recognize excellence in epithelial or renal physiology. An annual award is made to an investigator who holds an academic rank no higher than assistant professor and is pursuing research in epithelial or renal physiology. An award is made to an APS member working in the United



APS President Douglas C. Eaton and Susan Gunst, Chair, APS Respiration Section, present Ryan W. Bavis with the Giles F. Filley Memorial Award.



APS President Douglas C. Eaton presents the Lazaro J. Mandel Young Investigator Award to Pablo A. Ortiz.



APS Past-President D. Neil Granger presents the Henry Pickering Bowditch Award Lecture to Ulrich Hans Von Andrian.



Chahrzad Montrose-Rafizadeh, Chair of the APS Liaison with Industry Committee, and APS President Douglas C. Eaton present the 2006 Liaison with Industry Award to Lydia E. Kuo.



Chahrzad Montrose-Rafizadeh, Chair of the APS Liaison with Industry Committee, and APS President Douglas C. Eaton present the 2006 Liaison with Industry Award to Olga Starodub.

States who has demonstrated outstanding promise based on his or her research program. Each award is for \$7,500 and is designated for the use of the awardee in his/her research program. Eaton presented the 2006 Mandel Award to Pablo A. Ortiz, Henry Ford Health Science Center.

F. Arthur C. Guyton Young Investigator Award

The Arthur C. Guyton Award Fund was established in 1993 to recognize the contributions of Arthur C. Guyton and his interests in feedback, modeling, and integrative physiology. The awards are made to independent investigators working in the United States, who hold an academic rank no higher than assis-

tant professor, and are pursuing research that utilizes integrative approaches to the study of physiological function and explores the role of feedback regulation in physiological function. Each award is for approximately \$15,000 and is designated for the use of the awardee in his research program. This year the Society is pleased to present the award to Nikolaos Tsoukias, Florida International University.

G. Liaison with Industry Awards

The Liaison with Industry Awards are given for the best abstract describing a novel disease model. This is the fifth year this award has been given. Eaton and Chahrzad Montrose-Rafizadeh, Chair of the Liaison with Industry

Committee, presented the 2006 Liaison with Industry Awards to Lydia E. Kuo, Georgetown University, and Olga Starodub, University of Cincinnati.

H. David S. Bruce Awards

The annual David S. Bruce Awards for Excellence in Undergraduate Research is granted to up to four currently enrolled undergraduate students who are first authors on a poster presented at the EB meeting. Each receives a cash award of \$500. This year the Society is pleased to recognize Manasi Bhate, Oberlin College/Vanderbilt University; Jennifer M. Edwards, Michigan State University; Jon C. Gonzales, Colorado State University; and Gillian L. Sowden, Williams College.



APS President Douglas C. Eaton presents the 2006 Bodil Schmidt Nielsen Distinguished Mentor Award to L. Gabriel Navar.



APS President Douglas C. Eaton presents the Arthur C. Guyton Young Investigator Award to Nikolaos Tsoukias..



APS President Douglas C. Eaton presents the 2006 Walter C. Randall Lecturer in Biomedical Ethics Award to Randall S. Prather.



APS President Douglas C. Eaton presents a plaque to Outgoing Chair of the Long Range Planning Committee, L. Gabriel Navar.



APS President Douglas C. Eaton presents a plaque to Outgoing Chair of the Section Advisory Committee, Susan Barman.

I. Caroline tum Suden / Frances Hellebrandt Professional Opportunity Awards

Thirty-six awards were made possible by the bequests of Caroline tum Suden and Frances Hellebrandt, who were long-time members of the Society. Awards are open to graduate students or postdoctoral fellows who present papers at the spring meeting. Recipients receive a \$500 check for travel to the Experimental Biology meeting, paid registration, and have access to the FASEB Placement Service. Siribhinya Benyajati, Chair of the Women in Physiology Committee, presented the awards.

J Minority Travel Fellowships

Frank announced that 53 Minority Travel Fellowship awards, funded by

NIDDK and NIGMS, were presented to minority students to help them attend the Experimental Biology 2006 meeting.

K. Porter Travel Fellows Award

The Porter Physiological Development Awards are designed to support the training of talented students entering careers in physiology by providing pre-doctoral fellowships for underrepresented students. Each award includes an \$18,000 stipend. This year's recipients are: Jessica Clark, University of Arizona; Damon Jacobs, University of North Carolina, Chapel Hill; Lymari López-Díaz, University of Michigan; Jeffrey B. Mason, University of California, Davis; Walson Metzger, UMDNJ; Kristy M. Nicks, University of Arkansas for Medical Sciences; Adrienne L. Orr, Stanford University;

Clintoria Latrice Williams, University of Alabama at Birmingham.

L. Undergraduate Summer Research Fellowships

This year the APS will support 13 undergraduate summer research fellowships. These fellowships allow full-time undergraduate students to work in the laboratory of an established investigator. The intent of the program is to excite and encourage students to pursue a career as a basic research scientist. The award includes a \$3,000 summer stipend and \$1,000 for travel to the next Experimental Biology meeting. The year's recipients are: Manasi P.Bhate, Oberlin College/Vanderbilt University; Jenna E. Coalson, Stanford University/University of Nebraska; Carol Ann Duke, University of



APS President Douglas C. Eaton presents a plaque to Outgoing Chair of the Trainee Advisory Committee, Caroline Sussman.



APS President Douglas C. Eaton presents a plaque to Outgoing Chair of the Public Affairs Committee, William Talman.



APS President Douglas C. Eaton presents a plaque to Outgoing Councillor Helen Raybould.



APS President Douglas C. Eaton presents a plaque to Outgoing Councillor Jeff Sands.

Alabama at Birmingham; Jennifer M. Edwards, Michigan State University; Aaron D. Fain, University of Kentucky; Adrian A. Feijo, University of Maryland Baltimore County/Tripler Army Medical Center; Jarem B. Lloyd, Weber State University; Robert A. Overton, Jr., University of North Carolina, Charlotte; Nirmala Ramalingam, Rutgers University; Bryan J. Tokarchic, Juniata College/Brigham & Women's Hospital; Kathryn V. Tormos, Benedictine University; Jared M. Winiko, University of Florida; Erin A. Wyatt, University of Kentucky.

M. Recognition of Outgoing Section Chairs

Alan Sved, Chair of the Neural Control & Autonomic Regulation Section and **Joey Granger**, Chair of

the Water & Electrolyte Homeostasis Section, complete their terms at the close of the EB06 meeting. Eaton thanked them for their service to their sections and to APS.

N. Recognition of Outgoing Committee Chairs

Eaton recognized the outgoing committee chairs and thanked them for their service to the APS. He said that "this is a bitter-sweet part of the Business Meeting since these members are stepping down from their current positions." The outgoing chairs are **L. Gabriel Navar**, Chair of the Long Range Planning Committee; **William Talman**, Chair of the Public Affairs Committee; **Susan Barman**, Chair of the Section Advisory Committee; and **Caroline Sussman**, Chair of the Trainee Advisory Committee.

O. Recognition of Outgoing Councillors

Councillors **Helen Raybould** and **Jeff Sands** will complete their terms at the close of this meeting. Eaton thanked them for their service to the Society.

D. Neil Granger was recognized for his service as APS President. When presenting Granger with the Past-President plaque Eaton said "I want to thank him for his tireless efforts to advance the Society in numerous areas."

P. New Business

Award Presentation

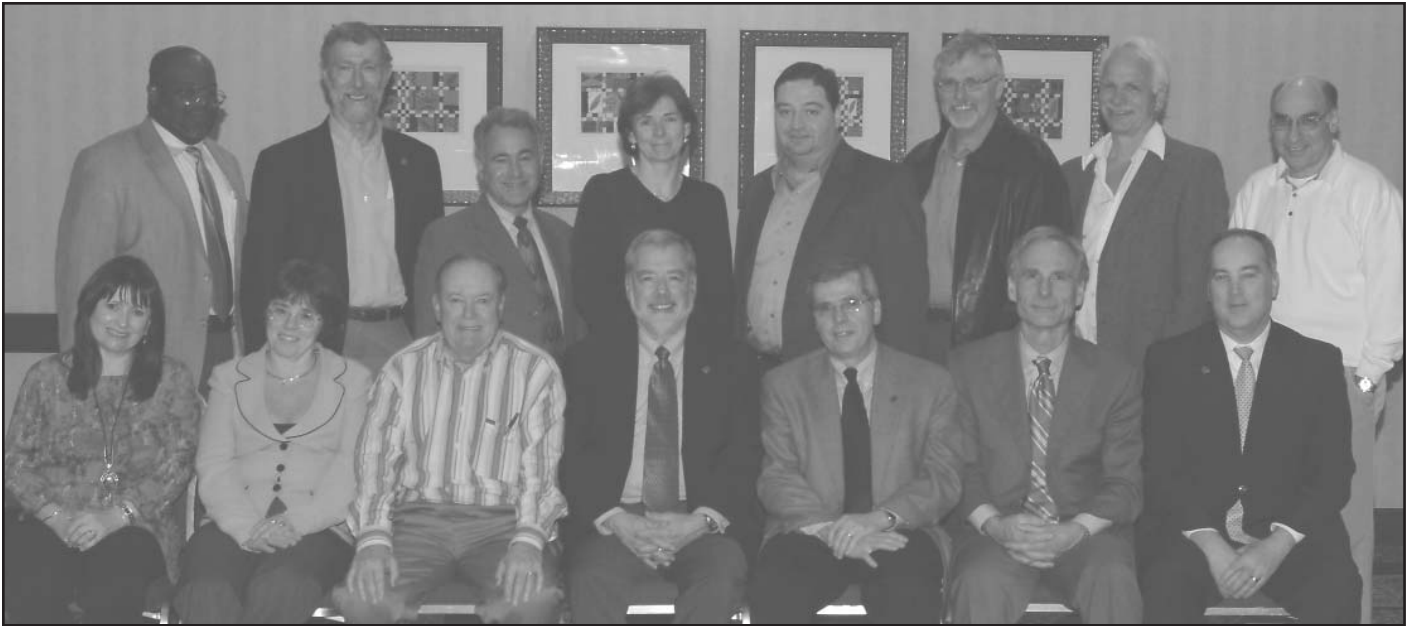
A presentation to APS was made by members **William Chilian**, Louisiana State University HSC, and **L. Gabriel Navar**, Tulane University HSC. Chilian and Navar said that they wanted to acknowledge the contributions made by APS to the trainees at their institutions



APS Members William Chilian and L. Gabriel Navar present a plaque of appreciation to APS President Douglas Eaton and APS Executive Director Martin Frank.



APS President Douglas C. Eaton presents a commemorative plaque to APS Past-President D. Neil Granger.



APS Council: Back Row (l-r) Irving Joshua, Peter Wagner, Jeff Sands, Helen Raybould, Curt Sigmund, in-coming Councillor James Hicks, in-coming Councillor J. Michael Wyss, Irving Zucker; Front Row (l-r) Kim Barrett, Susan Barman, Kenneth Baldwin, Douglas Eaton, D. Neil Granger, Thomas Lohmeier, Rob Carroll.

through the Hurricane Katrina Fund. On August 6, Hurricane Katrina left the city of New Orleans devastated. Both LSU and Tulane were heavily damaged from the hurricane. The labs at both of these institutions lost many resources such as reagents and lab animals; and these institutions are still feeling effects

of the storm today. The Government, at all levels, was very late in getting help to residents. In a matter of days, APS posted a bulletin board on their web site that allowed all members in New Orleans to communicate with each other, which was extremely important to all those affected by the storm. More importantly,

the Society offered grants to trainees that helped them to continue their academic pursuits. In appreciation of the Society's efforts to help the trainee members, Chilian and Navar presented a plaque to APS inscribed with the names of the 44 students that received grants from the APS Hurricane Katrina



APS Section Advisory Committee: Back Row (l-r) David Gutterman, Francis Belloni, James Rose, James Hicks, Alan Sved, Simon Lewis; Front Row (l-r) Pamela Carmines, Christopher Cheeseman, Kenneth Baldwin, William Martin, Joey Granger.

Fund. The inscription on the plaque read: *The Departments of Physiology of Tulane School of Medicine and Louisiana State University Health Sciences Center would like to express gratitude to the American Physiological Society for their critical and invaluable support of the below named students and fellows in the aftermath of Hurricane Katrina. The character of a person or an organization is shown during a crisis, and the American Physiological Society has proven itself to be an organization of character and of compassion. We, and the above trainees, will remember this act of kindness and generosity.*

Navar and Chilian said they wanted

to extend their appreciation to all APS members saying that their “contributions to the Katrina Fund was a true act of kindness.” They said that “the rapid response was truly gratifying. Thanks to all the membership and APS.”

VII. Passing of the Gavel

Eaton then passed the gavel to **Dale J. Benos**, University of Alabama, Birmingham, incoming President of the American Physiological Society saying that “it gives me great pleasure to welcome Dale Benos as the next president of APS.” Dale addressed the membership and said that “it is with a great deal of excitement and trepidation that I face

the next year. Member activism will be the theme that I will focus on during the upcoming year.” He said that he would like to have more members involved with the Society, and will make it easier for them to become involved. He said that “the tutelage from Doug and Neil has been wonderful. Doug has done a wonderful job and I want to thank Doug for his tireless efforts on behalf of the APS.”

There being no new business, the meeting was adjourned at 7:10 PM, April 4, 2006. ❖

*Dale J. Benos
President-Elect*



APS Past Presidents: Back Row (l-r) James Schafer, Brian Duling, Allen Cowley, John Williams, John West; Middle Row (l-r) John Hall, Shu Chien, Barbara Horwitz, William Dantzler, L. Gabriel Navar, Walter Boron; Front Row (l-r) William Ganong, D. Neil Granger, Hannah Carey, Douglas Eaton, Dale Benos, APS Executive Director Martin Frank.

Graduate Students and Postdoctoral Fellows Receive Caroline tum Suden/Hellebrandt Professional Opportunity Awards

Graduate students and postdoctoral fellows who were first authors on an abstract submitted to Experimental Biology 2006 in San Francisco, CA were eligible to apply for the Caroline tum Suden/Frances A. Hellebrandt Professional Opportunity Award. The APS Women in Physiology Committee, chaired by Siribhinya Benyajati, University of Oklahoma Health Sciences Center, selected 36 awardees from a pool of 134 applicants. Applicants were chosen based on the quality and novelty of their abstracts, and letters written by the candidates describing their career goals, research, and why they were particularly deserving of the award. Each awardee received \$500, a certificate of recognition, and complimentary registration for the EB 2006 meeting. Awards were presented during the APS Business Meeting. Awardees were:

Kyan J. Allahdadi, Univ. of New Mexico
Diego F. Alvarez, Univ. of South Alabama
Lavanya Balasubramanian, Univ. of South Florida
Jennifer M. Bomberger, Dartmouth Medical School
Brad Broughton, Univ. of New Mexico
Melissa A. Burmeister, Univ. of Iowa
Chin Chen, Stanford Univ.
Tom Cherng, Univ. of New Mexico
Emily Cordas, Dartmouth Medical School
F. Spencer Gaskin, Univ. of Missouri
Bryan G. Helwig, Kansas State Univ.

Darren Hoffmann, Univ. of Iowa
Lacy A. Holowatz, Pennsylvania State Univ.
Belinda L. Houghton, Univ. College Cork, Ireland
James C. Hunter, Univ. of Michigan
Eric Ispanovic, York Univ., Toronto
Sherry Kasper, Univ. of Tennessee Medical Center
Karen R. Kelly, Univ. of Southern California
Tarek M. Mousa, Univ. of Nebraska Medical Center
Stella A. Nicolaou, Univ. of Cincinnati
Carrie A. Northcott, Michigan State Univ.
Zsuzsanna Orosz, New York Medical College
Rebecca R. Quesnell, Kansas State Univ.
Marcella Raney, Univ. of Southern California
Paul A. Rogers, Louisiana State Univ. HSC
Jeffrey R. Scott, Beth Israel Deaconess Med. Center, Harvard
Guillermo Silva, Henry Ford Hospital, Detroit
Wook Song, Univ. of Texas HSC, San Antonio
Madelyn Stumpf, St. Louis Univ. School of Medicine
Wei Tan, Univ. of Mississippi Medical Center
Janos Toth, New York Medical College
Johana Vallejo-Rodriguez, Univ. of California, Los Angeles
Patricia Westmoreland, Univ. of Iowa College of Medicine
Julia E.R. Wilkerson, Univ. of Wisconsin
Paulette M. Yamada, Univ. of New Mexico
Weirong Zhang, Univ. of Texas HSC, San Antonio



2006 Caroline tum Suden/Hellebrandt Professional Opportunity Awardees and Siribhinya Benyajati, Chair, APS Women in Physiology Committee.

Undergraduate Students Receive David S. Bruce Awards for Excellence in Undergraduate Research

Four undergraduate students who were first authors on abstracts submitted to Experimental Biology 2006 in San Francisco, CA received David S. Bruce Awards for Excellence in Undergraduate Research. The APS Education Committee, chaired by Robert G. Carroll, East Carolina University, initially selected 12 finalists from a pool of 28 applicants. Finalists were chosen based on the quality and novelty of their abstracts and letters written by the candidates describing their career goals, their role in the research, and the significance of the research. The 12 finalists were:

Manasi Bhate, Oberlin College/
Vanderbilt Univ.
Carol W. Y. Chan, Univ. of Calgary
Jennifer M. Edwards, Michigan
State Univ.
Adrian A. Feijoo, Univ. of Maryland,
Baltimore/Tripler Army Medical
Center
Jon C. Gonzales, Colorado State
Univ.
David G. Ingram, Univ. of Missouri
Mary E. McCarty, Tulane Univ.
Robert A. Overton, Jr., Univ. of
North Carolina, Charlotte
Kate E.R. Russell, Bates College
Julia C. Simons, Bates College



The 2006 David S. Bruce Award Finalists.

Marissa L. Smith, Radford Univ.
Gillian L. Sowden, Williams College
These students then made oral presentations of their posters to a subcommittee chaired by Robin Looft-Wilson (The College of William & Mary). Four awardees were selected based on their knowledge of their research project. Each awardee received \$500 and a certificate of recognition. Awards were presented by Carroll and President Douglas Eaton during a special APS Undergraduate

Poster Session at EB 2006. The awardees were:

Manasi Bhate, Oberlin College/
Vanderbilt Univ.
Jennifer M. Edwards, Michigan
State Univ.
Jon C. Gonzales, Colorado State
Univ.
Gillian L. Sowden, Williams College
APS congratulates all these students on the quality of their research and presentations.

The APS award is named in honor of APS member David S. Bruce (1939–2000), who served as Chair of the APS Teaching Section and was a professor of physiology at Wheaton College from 1978–2000. Bruce was a dedicated physiology educator who had a particular interest in engaging undergraduate students in scientific research. Bruce not only encouraged and supported his students in participating in research, but he also regularly brought undergraduate students to the Experimental Biology meeting, often to present their research findings. For more information, visit the APS website at <http://www.the-aps.org/awards/student/bruce.htm>. ❖



The 2006 David S. Bruce Award Awardees.

Luncheon and Presentations Honor APS Summer Research Teachers and Hosts

Twenty middle and high school science teachers joined thousands of researchers to learn about cutting edge research at EB 2006. The EB experience serves as the culminating activity of their 12-month fellowship as 2005 Frontiers in Physiology and Explorations in Biomedicine summer Research Teachers (RTs). During the meeting, teachers learned about the latest science research findings, met with physiologists, attended workshops, and toured the posters and exhibits. Several of the RTs also presented posters about their summer research projects along with their research hosts and lab teams.

The 2005 Summer Research Teachers and their APS member Research Hosts were honored at a luncheon during EB 2006. Teachers received certificates of achievement for completing the 12-month fellowship and their Research Hosts were presented certificates of appreciation for their participation. Robert Carroll, Chair of the Education Committee, served as the master of ceremonies. President Douglas Eaton and Executive Director Martin Frank

offered their congratulations while presenting certificates to the teachers and their hosts. Also recognized were the six dedicated Mentor/Instructors, who, as former RTs, skillfully guided the 2005 Research Teachers through their fellowship year and the 2005 Physiologists-in-Residence, Andrea Gwosdow, Gwosdow Associates, and Rudy M. Ortiz, Univ. of California, Merced.

The Frontiers in Physiology and Explorations in Biomedicine programs are designed to create ongoing relationships between research scientists and middle and high school teachers; and to promote the adoption of the National Science Education Standards for K-12 science content and pedagogical techniques among middle and high school teachers. The Explorations in Biomedicine project works intensively with the science faculty at schools and tribal colleges that serve Native American students to create an atmosphere that encourages science studies, and the exploration and pursuit of biomedical research careers.

The Summer Research program

offers teachers nationwide a full-time, hands-on laboratory experience for seven to eight weeks at APS members' research labs. Teachers also attend a one-week workshop at the Airlie Center in Warrenton, VA, where they explore hands-on, inquiry based teaching strategies, consider classroom equity and technology-use issues, and begin to develop their own inquiry lab activities.

Frontiers in Physiology 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 program is supported by a grant from the National Institutes of Health, National Institute of General Medical Sciences (NIGMS Grant #GM08634), Minority Access to Research Careers (MARC) Program.

More information about these programs is available on the APS website at http://www.the-aps.org/education/edu_k12.htm. ♦



2005 Research Teachers and their Research Hosts.

Undergraduate Research Highlighted at Special EB Session

EB 2006 provided the setting for the third annual APS Undergraduate Poster Session. This special session highlights the contributions of undergraduate students to physiology research. Students present their poster at both their regularly scheduled poster session and the special Undergraduate Poster Session. As in previous years, it was held Sunday afternoon of the EB meeting and culminated in the presentation of the David S. Bruce Awards.

Of the 114 undergraduate first authors invited to present at the APS Undergraduate Poster Session, 96 accepted the invitation, but more than 120 undergraduates came to the session and took advantage of the opportunity to display their poster and present it to interested scientists and guests. The session not only provided undergraduate students with an opportunity to highlight their research but also to meet faculty from many graduate schools and medical schools to discuss their future plans. Approximately 200 APS members and guests were in attendance at the session, with many comments heard as to the high quality of research being presented by the students. The students and



President-elect Dale J. Benos and APS member Rajiv Janardhanan talk with undergraduate students about their posters.

their research were highlighted again this year in a special printed program distributed during the session.

For the first time, graduate departments were invited to sponsor the session and display promotional materials for their departments to those undergraduates considering graduate school. The Department of Physiology Graduate Programs at Georgetown University, the Department of Cellular and Integrative Physiology at the University of Nebraska Medical Center, and the Department of Physiology at the University of Mississippi Medical School helped to sponsor the session. The departments received a list of undergraduate presenters who indicated they would be interested in attending graduate school.

APS looks forward to hosting APS Undergraduate Poster Sessions at future Experimental Biology meetings and encourages APS members' undergraduate students to submit abstracts for EB, apply for the David Bruce award, and attend the poster session in 2007. Department chairs who are interested in sponsoring the 2007 Undergraduate Poster Session and displaying materials for their departments are encouraged to contact Melinda Lowy of the APS Education Office (mlowy@the-aps.org). ❖



Faculty members from the Department of Physiology at the University of Mississippi Medical School, talk with an undergraduate student about their graduate program. The department was one of the session sponsors.

2006-2007 Porter Physiology Fellows Announced

The APS and Porter Physiology Development Committee congratulate the 2006-2007 APS Porter Physiology Fellows:

- Andrew J. Clark, Univ. of California, Irvine
- Lymari López-Díaz, Univ. of Michigan
- Jeffrey B. Mason, Univ. of California, Davis
- Kristy M. Nicks, Univ. of Arkansas for Medical Sciences
- Adrienne L. Orr, Stanford Univ.
- Brandi A. Thompson, Univ. of Michigan
- Ricardo A. Valenzuela, Stanford Univ.
- LaShon C. Sturgis, Medical College of Georgia

LaShon Sturgis was named the 2006-2007 Merck Fellow in honor of Merck & Co., Inc., a Porter program contributor, highlighting the fact that she had the highest ranked application of all the new applicants to the program. Lymari López-Díaz, the 2005-2006 Merck Fellow, was named the 2006-2007 Eleanor Ison-Franklin Fellow in honor of Franklin, the past

Co-Chair of the Porter Committee, indicating that she had the highest ranked application among the renewal applicants.

The Porter Physiology Fellowships for minorities are one-year fellowships that provide a stipend of \$20,772. 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/stu_fellows/porter_phy/ov_pp.htm or contact Melinda Lowy in the APS Education Office at education@the-aps.org or 301-634-7132. The deadline for 2007-2008 applications is **January 15, 2007**. ❖

San Francisco Science Teachers and Students Explore Physiology at EB 2006

More than 160 San Francisco area high school teachers and students participated in the Physiology for Life Science Teachers and Students Workshop at EB 2006. The workshop included a keynote presentation, a careers panel discussion, lunch, and hands-on physiology workshops for the teachers and students. During this jam-packed day, participants learned about current research findings, explored hands-on, inquiry based lab activities, learned about education and careers in biomedicine, met with APS researchers, and toured the EB posters and exhibits. Education Committee member, Peter Farrell, East Carolina University, coordinated the day's events and Robert Carroll, Eastern Carolina University, Chair of the Education Committee, served as the master of ceremonies.



Jim Pawelczyk explains physiological problems during space travel.

The keynote talk, "What Price a Martian? Human Limits to Exploring the Red Planet," was given by APS member and former astronaut Jim Pawelczyk of Penn State University. Pawelczyk outlined the human physiology research questions that must be answered to launch a successful mission to Mars. He went on to challenge the high school students, pointing out that their generation would provide the physiologists and engineers who would find solutions to issues such as radiation exposure and osteoporosis. The keynote was followed by a Careers in

Physiology Panel Discussion. APS members Ken Baldwin of Univ. of California, Irvine, Rudy Ortiz of Univ. of California, Merced, Jim Pawelczyk of Penn State, and Todd Trappe of Ball State University discussed the excitement of research careers in physiology and the training required to become a physiologist. Twenty APS members served as tour guides during lunch where they took teachers and students through exhibits and posters and shared a box lunch while discussing physiology careers.

The afternoon student session was led by Barb Goodman of Univ. of North Dakota with assistance from Peter Farrell, Jeff Osborn of Univ. of Kentucky, Robin Looft-Wilson of College of William & Mary, and Rayna Gonzales of Univ. of



Students explore the effects of viscosity on flow rates.

California, Irvine. 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 2005 Research Teachers) participated in workshop activities on proprioception and the respiratory system, with presentations by Indianapolis teachers Greg McCurdy and George Potter. As in the past, feedback from both teachers and students was very positive and students were especially excited to meet physiologists one-on-one. The committee is planning to continue the program in 2007 in Washington.

The Frontiers in Physiology and



Teachers design a tool to measure vital lung capacity.



Rudy Ortiz describes his career as a physiologist.

Explorations in Biomedicine programs are designed to create ongoing working relationships between research scientists and middle/high school teachers via research and inservice experiences and electronic communications. Additionally, these programs promote the adoption of national standards for K-12 content and pedagogical techniques among middle and high school science teachers through ongoing inservice activities developed collaboratively by teachers and physiology researchers.

Frontiers in Physiology is a program of APS, and is sponsored by APS, the

National Center for Research Resources, Science Education Partnership Awards, and the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health. The Explorations in Biomedicine project works intensively with the science faculty at Montana schools and tribal colleges that serve Native American students to create an atmosphere that encourages science studies, the exploration and pursuit of biomedical research careers, and opportunities for students to interact with biomedical researchers in their geographic area and across the nation. The

overall goal of this project is to increase interest and participation in biomedical research careers among Native American students. Explorations in Biomedicine is a collaborative program of APS and the American Indian Research Opportunities Consortium and is supported by a grant from the NIH/National Institute of General Medical Sciences Minority Access to Research Careers Program.

For more information about these APS programs, please visit the APS website at: <http://www.the-aps.org/education.htm>. ❖

Navar Receives Schmidt-Nielsen Distinguished Mentor and Scientist Award

The APS Women in Physiology Committee hosted a reception at Experimental Biology 2006 to honor L. Gabriel Navar, Professor and Chairman of the Department of Physiology and co-Director of the Tulane Renal and Hypertension Center of Excellence at Tulane University School of Medicine, as the third recipient of the Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award.

More than 75 trainees, EB awardees, and colleagues gathered to celebrate the award and hear Navar's award lecture entitled, "From Mentee to Mentor: Lessons Learned Along the Way." The talk will be published in a future issue of *The Physiologist* and posted on the APS Mentoring web site (<http://www.the-aps.org/career>). Lisa Harrison-Bernard (Louisiana State University Health Sciences Center), who coordinated the nomination of Navar for the award, was present to introduce him. The award was presented to Navar by Siribhinya Benyajati, Chair of the Women in Physiology Committee, and Douglas Eaton, President of the APS.

Navar received his PhD at the University of Mississippi under the direction of Arthur Guyton. He served as a faculty member at the University of Mississippi School of Medicine and at the University of Alabama at

Birmingham prior to his appointment as Professor and Chairman of the Department of Physiology at Tulane University in 1988. Navar has a highly successful research program, contributing significantly to fundamental research in the fields of renal hemodynamics and hypertension. Navar's excellence in scientific research has been honored with awards from the American Physiological Society, the American Heart Association, and the American Society of Hypertension.

Navar's career as a mentor has been exemplary, having mentored 21 predoctoral students, 42 postdoctoral fellows, and four visiting scientists over the past 40 years. These mentees have gone on to a wide variety of positions in both academia and medicine and are leading successful scientific careers. Many of those who wrote the supporting recommendation letters attested to Navar's unique mentoring style, his commitment to life-long mentoring of trainees, his scientific integrity, his love of science, his role in introducing trainees to experts in the field, and his ability to make his trainees feel like family. As summed up by one of Navar's mentees, "Despite his considerable scientific contributions, his most important, and enduring legacy can be found in the lives, careers and contributions of the

people he has trained and shaped throughout his career. These individuals were set upon their career paths after having been prepared and nurtured under Dr. Navar's supervision."

APS congratulates Dr. Navar on this well-deserved honor.

APS members are encouraged to nominate members for the 2007 Bodil Schmidt-Nielsen Award. For more information, see the APS website (<http://www.the-aps.org/awards/society/schmidt-nielsen.htm>). Application deadline is September 15, 2006. ❖



APS President Douglas C. Eaton presents the 2006 Bodil Schmidt-Nielsen Distinguished Mentor Award to L. Gabriel Navar.

New Program Improves Trainees' Writing and Reviewing Skills

Nearly 80 graduate students and postdoctoral fellows from four biomedical fields honed their writing skills at two three-day APS Professional Skills Workshops on "Writing and Reviewing for Scientific Journals" (January 12-15 in Orlando, FL; May 4-7 in Denver, CO). The courses were supported by a grant to the APS from the National Institute of General Medical Sciences (NIH Grant #GM073062-01).

The workshops allowed attendees to:

- improve their skills at writing and submitting manuscripts;
- learn how to better respond to reviewer criticisms;
- learn how to be a good reviewer themselves;
- find out how their skills in these areas will impact their career advancement;
- discover how diversity issues can influence how they write and review manuscripts;
- learn about resources that can further develop their writing and reviewing skills.

The workshops were especially designed for underrepresented minority students. They brought together trainees from APS as well as from three partner societies: [American



Lori McMahon's group discusses a manuscript at the first workshop.

Judith Neubauer, UMDNJ, RW Johnson Med. School (both workshops)
Joan Slonczewski, Kenyon College (ASM)
Sharif Taha, Univ. of California, San Francisco (SfN)
Cathy Uyehara, Tripler Army Medical Center
R. Clinton Webb, Medical College of Georgia
Charles Wood, Univ. of Florida Coll. Med.

In addition, invited speakers offered plenary talks on specific topics associated with writing and reviewing for journals. They were:

Francis Belloni, New York Medical College
Dale Benos, Univ. of Alabama at Birmingham
Martin Farias, Univ. of Texas Southwestern
Gregory Florant, Colorado State Univ.
Yolanda George, AAAS, Deputy Director, Education and Human Resources
Irving Joshua, Univ. of Louisville, School of Medicine
Melinda Lowy, APS (both workshops)
Patricia Molina, Louisiana State Univ. HSC, New Orleans
Evangeline Motley-Johnson, Meharry Medical College
Rudy Ortiz, Univ. of California, Merced
Margaret Reich, APS (both workshops)
Alberto Roca, Co-chair, SACNAS Postdoc Committee
Irving H. Zucker, Univ. of Nebraska College of Medicine

In January and May 2007, the APS will hold its next Professional Skills workshops, focusing on presentation skills. The workshop will be developed by the members of the Professional Skills Advisory Board. For more information or to sign up for email notification of the next short course, see the Professional Skills website at <http://www.the-aps.org/education/professionalskills/>. ❖



Patricia Molina, Sharif Taha (Society for Neuroscience), and Irving Joshua respond to questions on abstracts and titles at the second workshop.

Society for Microbiology (ASM), Society for Developmental Biology (SDB), and Society for Neuroscience (SfN)].

Trainee participants worked in small groups of four matched with an established biomedical researcher in their field from one of the four societies to better enable them to receive individualized training and hands-on training at writing and reviewing their own writing and that of their colleagues, as well as allowing for networking opportunities within their field of study.

APS thanks the following group leaders for their hard work and dedication to the students:

Kim Barrett, Univ. of California, San Diego (both workshops)
Françoise Chanut, Univ. of California, San Francisco (SfN)
Robert Hester, Univ. of Mississippi Medical Center
Barbara Horwitz, Univ. of California, Davis (both workshops)
Mark Knuepfer, Saint Louis Univ. (both workshops)
Charles Lang, Pennsylvania State Univ.
Larry McDaniell, Univ. of Mississippi Medical Center (ASM)
Lori McMahon, Univ. of Alabama at Birmingham
Mary Montgomery, Macalester College (SDB)
Jo Morello, The Univ. of Chicago (ASM)



Mark Knuepfer's group discusses a manuscript at the second workshop.

2006 APS/NIDDK Minority Travel Fellows Attend Experimental Biology in San Francisco

The APS regularly awards Travel Fellowships for underrepresented minority scientists and students to attend APS scientific meetings with funds provided by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). These Fellowships provide funds for registration, transportation, meals, and lodging for travel to a meeting location, as well as complimentary meeting registration. Fifty-two Fellows attended the APS annual meeting, "Experimental Biology" (EB) in San Francisco, CA from April 1-5, 2006.

Fellows in the NIDDK Minority Travel program not only received financial support to attend these meetings, but were also provided professional guidance through pairings with APS members who served as mentors to the Fellows for the duration of the conference. Thanks to the time and expertise offered by mentor volunteers, Fellows were able to maximize their time and more fully experience the many aspects of each conference.

During EB, Fellows attended an orientation and reception on Saturday afternoon and a luncheon on Wednesday. This year, the luncheon speaker was Rudy Ortiz, Univ. of California, Merced. Ortiz discussed opportunities for trainees within the APS and how membership in the Society is beneficial to them. An optional networking breakfast was also scheduled on Monday morning.

The travel awards are open to graduate students, postdoctoral students, and advanced undergraduate students from minority groups underrepresented in science (i.e., African Americans, Hispanics, Native Americans, and Pacific Islanders). Students must be US citizens or permanent residents. The specific intent of this award is to increase participation of pre- and postdoctoral minority students in the physiological sciences. For more information, contact Brooke Bruthers in the APS Education Office at 301-634-7132 or bbruthers@the-aps.org, or visit http://www.the-aps.org/education/minority_prog/index.htm on the APS website.

Fellows at "Experimental Biology 2006":

Nancy M. Aguilar-Roca, Univ. of California, Irvine
Christophe Arteaga, Barry Univ.
Julio E. Ayala, Vanderbilt Univ.
Kimberly M. Benavidez, New Mexico State Univ.
Sydella Blatch, Arizona State Univ.
Jessica M. Bryant, Univ. of New Mexico
Sonya D. Coaxum, Medical Univ. of South Carolina
Nildris Cruz-Diaz, Univ. of Puerto Rico, Med. Sci. Campus
Marielly Cuevas-Torres, Ponce School of Medicine

Maria E. Davila, Univ. of Texas Health Science Center
Adetokunbo Omolola Enioza, Baylor College of Medicine
Natasha L. Escobar, Univ. of Puerto Rico, Med. Sci. Campus
Tina C. Franklin, Barry Univ.
Jose O. Garcia Colon, Univ. of Puerto Rico, Med. Sci. Campus
Shea Gilliam-Davis, Wake Forest Univ. School of Medicine
Anjelica L. Gonzalez-Simon, Baylor College of Medicine
James E. Harris, Auburn Univ.
Raelina Howell, Univ. of Maryland-Baltimore County
Nikki Jernigan, Univ. of Mississippi Medical Center
Alie Kanu, Univ. of Tennessee Health Science Center
Dexter L. Lee, Medical College of Georgia
Lymari Lopez-Diaz, Univ. of Michigan
Alberto W. Mares, Univ. of Texas at San Antonio
Christopher Mendias, Univ. of Michigan
Raissa Menendez-Delmeestre, Univ. of Puerto Rico
Javier A. Pagan Gutierrez, Ponce School of Medicine
Beatriz Pagan-Ortiz, Ponce School of Medicine
Phillip D. Palmer, Meharry Medical College
Myla M. Patterson, Univ. of Illinois at Chicago
Karl Pendergrass, Wake Forest Univ. School of Medicine
Arnaldo Michel Pica, Univ. of Med. & Dentistry of New Jersey
Manu O. Platt, Georgia Institute of Technology
Rhonda Prisby, West Virginia Univ. School of Medicine
Edelmarie Rivera De Jesus, Ponce School of Medicine
Jesus Salazar, Univ. of Michigan
Juliana K. Sampson, Univ. of California at Davis
Hiromi Sanders, East Carolina Univ.
Olga I. Santiago-Maldonado, Ponce School of Medicine
Cariluz Santiago-Ortiz, Ponce School of Medicine
Geidy E. Serrano, Univ. of Puerto Rico, Med. Sci. Campus
Haroldo Souza Silva, Florida International Univ.
Aerial L. Singleton, New Mexico State Univ.
Mesia Moore Steed, Univ. of Louisville
Keshari Thakali, Michigan State Univ.
Candice Thomas, Univ. of Louisville
Samantha N. Torres, Univ. of New Mexico
Johana Vallejo-Rodriguez, Univ. of California, Los Angeles
Wanda H. Vila-Carriles, Univ. of Alabama, Birmingham
Julia E. R. Wilkerson, Univ. of Wisconsin
Keisa Williams Mathis, LSU Health Sciences Center
Brett J. Wong, Univ. of Iowa
Paulette M. Yamada, Univ. of New Mexico.

APS Mentors at "Experimental Biology 2006":

Alice R. Villalobos, Univ. of Rochester School of & Dentistry
Johana Vallejo-Rodriguez, Univ. of California, Los Angeles
Rudy Ortiz, Univ. of California, Merced
Stephen C. Wood, Ross Univ. School of Medicine
Siribhinya Benyajati, Univ. of Oklahoma HSC
Rolando E. Rumbaut, Baylor College of Medicine &
Michael E. DeBaakey VA Medical Center
Merry L. Lindsey, Univ. of Texas HSC, San Antonio
Jerrold R. Turner, The Univ. of Chicago
Catherine F.T. Uyehara, Tripler Army Medical Center
Asrar B. Malik, Univ. of Illinois, Chicago
Peter A. Farrell, East Carolina Univ.
Stephen J. Crozier, The Univ. of Michigan
Catherine M. Fuller, Univ. of Alabama, Birmingham
Cynthia Ann Jackson, Vanderbilt Univ. Medical Center
Rayna J. Gonzales, Univ. of California, Irvine School of Med.



APS Executive Director, Martin Frank, thanks Rudy Ortiz, for his talk at the NIDDK luncheon.

Thomas C. Herzig, Medical Service Corps, US Navy
Keshari Thakali, Michigan State Univ.
Virginia M. Miller, Mayo Clinic College of Medicine
Judy M. Delp, West Virginia Univ.
Margaret Brosnan, Memorial Univ. of Newfoundland
David Robertshaw, Weill Cornell Medical College in Qatar
Gregory L. Florant, Colorado State Univ.
Patricia E. Molina, Louisiana State Univ., HSC
Dexter L. Lee, Medical College of Georgia
Christian Lytle, Univ. of California, Riverside
David M. Pollock, Medical College of Georgia
Kathleen H. Berecek, Univ. of Alabama, Birmingham
Sonya D. Coaxum, Medical Univ. of South Carolina
Jennifer S. Pollock, Medical College of Georgia
Roy L. Sutliff, Emory Univ./Atlanta VAMC
Thomas C. Resta, Univ. of New Mexico
Mark M. Knuepfer, St. Louis Univ. School of Medicine

Evangeline D. Motley, Meharry Medical College
Gina Schatteman, Univ. of Iowa
William R. Galey, Howard Hughes Medical Institute
Barbara T. Alexander, Univ. of Mississippi Medical Center
Adebayo O. Oyekan, Texas Southern Univ.
Morton I. Cohen, Albert Einstein College of Medicine
Marco E. Cabrera, Case Western Reserve Univ.
Nansie A. McHugh, Huntingdon Life Sciences
Lisa M. Harrison-Bernard, Louisiana State Univ., HSC
William Chilian, Louisiana State Univ. HSC
Kendall F. Morris, Univ. of South Florida College of Medicine
Ollie Kelly, Univ. of Alabama at Birmingham
Carole M. Liedtke, Case Western Reserve Univ.,
C. Subah Packer, Indiana Univ. School of Medicine
Charles H. Lang, Penn State College Medicine
John B. Buckwalter, Medical College of Wisconsin
Karen A. Carlberg, Eastern Washington Univ.



2006 APS/NIDDK Minority Travel Fellows.

Call for Nominations

Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award

The Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award honors an APS member of the who is judged to have demonstrated dedication and commitment to excellence in training of young physiologists whether by mentoring, guiding and nurturing their professional and personal development, developing novel education methods/materials, promoting scientific outreach efforts, attracting individuals to the field of physiology, or by otherwise fostering an environment exceptionally conducive to education in physiology and made outstanding contributions to physiological research.

The award was established to recognize Dr. Bodil M. Schmidt-Nielsen, the first woman APS President and a distinguished physiologist who has made significant contributions in her field.

The award of \$1,000 and a commemorative plaque will be presented at the annual EB meeting where the awardee will meet with APS members and young scientists.

Nominations can be submitted to the Women in Physiology Committee by any member of the American Physiological Society. The nomination should include the following:

a letter stating the basis for nomination with a synopsis of the nominee's scientific contributions and mentoring skills and evidence related to the criteria, such as:

assisting students with research funding or job placement, success of graduates, publications and presentations of graduate students, participation in graduate education activities, successful role model, teaching awards,

descriptions of innovative teaching methods, etc.;

a list of current and former trainees and their current positions and any award they received;

at least two and up to five additional support letters.

nominee's current curriculum vitae.

The nomination packet should be submitted by either a nominator(s) or by a nominator and the nominee.

Applications can be sent to the following address: Bodil Schmidt-Nielsen Distinguished Mentor and Scientist Award; American Physiological Society; Education Office; 9650 Rockville Pike; Bethesda, MD 20814-3991.

Applications are due by **September 15**.

For questions, please contact the APS Education Office at 301-634-7132 or education@the-aps.org. ❖

Undergraduate Summer Research Fellows Attend EB

The 2005 Undergraduate Summer Research Fellows (UGSRFs) came to the Experimental Biology meeting to report on their research findings from last summer.

Eleven of the 12 UGSRFs attended the meeting; the 12th was out of the country on an exchange program. Ten of the UGSRFs were authors on abstracts submitted to the meeting. Of those, nine were first authors on their abstracts.

As an orientation session, the UGSRFs met with William Galey, Chair

of the Career Opportunities in Physiology Committee, and Cathy Uyehara, Committee member. They were joined by the finalists for the David S. Bruce Excellence in Undergraduate Research Awards and the undergraduate NIDDK Travel Fellows. Galey and Uyehara talked with the students about what occurs during a large scientific meeting and how to get the most out of being there, both in terms of science and career talks as well as social activities. They also talked about poster presenta-

tions and hints for making that a positive experience.

On Sunday, the UGSRFs participated in the APS Undergraduate Poster Session and presented their posters to APS members, in addition to their regularly scheduled scientific session.

Overall, the UGSRFs saw the EB meeting as being a very positive learning experience and appreciated the opportunity to come and present their research. ❖

APS Teaching Section Awards



Mildred Hoover, Salem State College (MA), recipient of the Teaching Section's 2006 New Investigator Travel Award. On the right is Erica Wehrwein, PhD candidate at Michigan State University, who won one of the Teaching Section's Research Recognition Awards for her work on gender differences in learning style preference among undergraduate physiology students.



Francis L. Belloni, Chair of the Teaching Section presents the Bernard Lectureship plaque to Dee Silverthorn, University of Texas, Austin.



Francis L. Belloni, Chair of the Teaching Section presents a Teaching Section Research Recognition Award to Jennifer Lundmark of California State University, Sacramento, for her work on professional development in pharmacology for high school teachers.

The NIH Budget in the Post-doubling Era

In 2006, the National Institutes of Health (NIH) saw its budget cut for the first time in more than 30 years. Since 2004 the NIH budget has been growing at less than the rate of inflation, and the flattening budget has led to dwindling numbers of research project grants and a precipitous drop in success rates.

The outlook for the NIH budget in FY 2007 does not promise any relief for the agency or the extramural scientific community. In June, members of the House of Representatives Appropriations Subcommittee for Labor, Health and Human Services and Education, chaired by Rep. Ralph Regula (R-OH), followed the Administration's recommendation for the NIH, providing the agency with \$28.3 billion, the same allocation it received last year.

If the NIH is funded at last year's level, it will be the agency's second consecutive year without a budget increase and will result in continued erosion of purchasing power as the rate of biomedical inflation hovers at 3.8%. Under the Administration's proposal, most of the NIH institute and center budgets would be cut by 0.5-0.8%, resulting in the loss of approximately 650 research project grants. With the number of grant applications still on the rise, the NIH expects that overall success rates will drop to 19% in 2007, from a high of 32% in 2001.

In the Senate, Labor-HHS-Ed appropriators led by Chairman Arlen Specter (R-PA) will have a chance to reassess spending priorities. Chairman Specter and ranking member Senator Tom Harkin (D-IA) are both longtime supporters of the NIH. This year they worked together to champion an effort to add crucial additional dollars for Labor-HHS-Ed spending.

The final step in the funding process will be the reconciliation of the House and Senate versions of the spending bill. Reaching a compromise between the House and Senate versions will be particularly difficult this year, since the two chambers failed to agree on a budget resolution that sets the basic parameters for spending.

NIH Announces National Commission on Digestive Diseases

On April 18, NIH announced the membership of the National Commission on Digestive Diseases (NCDD), established in August of last year. Developed to address the needs of the over 70 million people affected by digestive disease, the NCDD will assess the current state-of-the-science for digestive disease research, review the NIH portfolio of funded digestive disease research and develop a strategic plan to guide such research for the next ten years. Dr. Zerhouni, when first announcing the Commission, stated his intention that it will "develop a plan to most effectively take advantage of advances in the field."

The Commission will be chaired by Stephen P. James, director of the National Institute of Diabetes and Digestive and Kidney Diseases Division of Digestive Diseases and Nutrition.

The new commission consists of 16 voting and 18 *ex officio* members, who are senior representatives from NIH and other federal government agencies connected to digestive disease. APS members Daniel Podolsky, Eugene Chang, Mitchell Cohen, and Kenton Sanders, will serve as voting members and APS member, Raj K. Goyal, of the DVA, will serve *ex officio*.

The Commission is chartered for two years.

The NCDD has been asked to develop a plan to cover all areas related to digestive disorders in basic, translational and clinical research. It should address training and education programs and information collection, dissemination and exchange programs. The NCDD is charged with making recommendations that are both ambitious and feasible and to identify opportunities, and direction, not only for the NIH, but also for the whole research community as well as the public.

APS Opposes Random Source Animal Restrictions

On April 27, 2006 Representatives Phil English (R-PA) and Mike Doyle (D-PA) introduced a bill that would make it virtually impossible to obtain

random source dogs and cats for medical research. H.R. 5229, which had 44 House co-sponsors as of May 25, is similar to a bill introduced in the Senate by Sen. Daniel Akaka (D-HI) on February 17, 2005. The "Pet Safety and Protection Act of 2005," as both bills are known, would bar Class B dealers from supplying random source dogs and cats for medical research. They would also make it more difficult for pounds to provide animals for research by requiring them to register with the USDA and to meet certain AWA standards that do not apply to pounds that simply euthanize animals.

The APS opposes H.R. 5229 and S. 451 because they would do more to disrupt medical research than they would to protect pets.

Even if Class B dealers no longer provided animals for research, pet theft would persist. That is because the primary "market" for stolen pets is widely believed to be individuals involved in illegal dog fighting rings. According to the Humane Society of the United States, "A single fighting dog has likely killed dozens of animals before entering the ring for competition, and most of the victims used in this 'bleeding' process are believed to be former pets."

Not only would H.R. 5229 and S. 451 do little to end pet theft, they offer no viable alternative to provide the random source dogs and cats needed for medical and veterinary research. For these reasons, the APS opposes the bills and has informed the bills' sponsors of its opposition. Researchers are encouraged to let their legislators know about the bills' harmful effects. The APS letter and a list of the bills' co-sponsors are available on the APS website at <http://www.the-aps.org/pa/>.

Although at one time researchers could readily obtain unwanted random source dogs and cats directly from pounds and shelters, 13 states now have laws prohibiting this practice, and a number of local jurisdictions have similar ordinances. As a result Class B dealers are the only option for many researchers who need non-purpose bred or "random source" dogs and cats. For researchers in those states, H.R. 5229 would put an end to research and related activities requiring animals that are older and genetically diverse.

Concern over the safety of family pets has long been a driving force among those who style themselves as

animal advocates. Allegations of pet theft led to the 1966 passage of the original Laboratory Animal Welfare Act. Since then the AWA has been amended several times to add new deterrents against pet theft as well as to prevent lost pets from unintentionally ending up in research labs. Researchers support pet protection, and research institutions do their part to make the system work. The existing laws may not be perfect, but they provide a good starting point to ensure both pet safety and the availability of random source dogs and cats needed for medical research.

There is impetus now to eliminate Class B dealers because of the recent and highly-publicized case of C.C. Baird, a Class B dealer who committed egregious violations of the Animal Welfare Act. In February, 2006, USDA settled its case against Baird who agreed to pay a record \$267,000 fine for multiple AWA violations including "severe mistreatment and neglect of a multitude of animals." The USDA also revoked his license and confiscated a number of animals from his kennels. Baird's case was extreme, but other Class B dealers have been charged with AWA violations involving failing to provide appropriate husbandry and veterinary care for their animals, obtaining animals under false pretenses or creating false ownership records.

Researchers welcome USDA efforts to take action against dealers who violate the AWA. Such abuses cannot and should not be tolerated, and the research community relies upon the USDA to enforce the law.

Activists assert that pet theft and animal abuse by Class B dealers can only be fixed by barring them from providing random source animals for medical research. However, many research institutions have no other

option to obtain random source dogs and cats except for Class B dealers because many pounds are cannot or will not provide animals for research.

Random source dogs and cats are needed for research into certain human and animal diseases, to test new veterinary medications, and to train veterinarians and physicians. The vast majority of animals in medical research today are rats, mice, zebra fish and fruit flies. All dogs and cats *together* comprise less than half a percent (0.5%) of laboratory animals, while *random source* dogs and cats represent perhaps a quarter of that total, an estimated 15,000-20,000 animals per year.

Dogs and cats are the best available research models for certain diseases because their cardiovascular, digestive, and neurological systems have important similarities to those of humans. They are important in studying diseases that affect dogs and cats themselves, as well as for medical and veterinary training. Activists claim that purpose bred animals can replace random source dogs and cats. Researchers disagree. Purpose bred animals are young and genetically homogeneous. Random source animals literally come in all ages, breeds and genetic backgrounds, which is important when the research involves diseases that develop as the body ages or when the research must take into account the effects of genetic diversity. Research in which older animals are needed includes cardiovascular, digestive, and musculoskeletal diseases. Research in which both age and genetic diversity are relevant includes the development of veterinary medicines that will be used to treat animals of different breeds and ages.

Random source dogs and cats have an important role to play in medical and veterinary research,

Concerned about waning federal support for biomedical research? Make your voice heard!

Next year's Experimental Biology meeting will be held in Washington, D.C., providing an excellent opportunity for physiologists to tell Members of Congress about the importance of sustained support for biomedical research. The APS Public Affairs Committee and staff are already organizing so that members can easily plan visits to Capitol Hill during EB 2007. For more details, see our website: <http://www.the-aps.org/pa>.

testing, and training, but H.R. 5229 and S. 451 would impede those activities. The solution is for Congress to provide the USDA the resources it needs to sustain rigorous enforcement of existing pet safety laws.

If your Senator or Representative is a sponsor of this legislation, please let him or her know that these bills would hamper research without solving the problem of pet theft. ❖

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; Tel: 301-634-7165; Fax: 301-634-7241).

Postdoctoral Positions

Postdoctoral Position: A postdoctoral position is available July 1, 2006 at the Robert M. Berne Cardiovascular Research Center at the University of Virginia to carry out research on mechanisms of smooth muscle cell phenotypic modulation in vascular disease, including the role of calcium signaling and sphingosine-1-phosphate signaling in this process. The Robert M. Berne Cardiovascular Research Center is one of the premier institutes for cardiovascular research in the US. The postdoctoral fellow will learn several cutting edge techniques including laser capture microdissection, embryonic stem cell techniques and rodent models of vascular disease, including transgenic and Cre/lox technology. The postdoctoral fellow will also play an integral role in ongoing collaborations with leading scientists at the University of Virginia. Applicants should have a PhD, MD or MD/PhD degree relevant to cardiovascular biology. The applicant MUST be highly motivated. Technical skills in cell and molecular biology are required. A background in physiology and experience with small animal surgical procedures and live-cell imaging is a plus, but not required. Salary is very competitive and will depend upon experience. To apply, send your curriculum vitae and the names of three references to: Brian R. Wamhoff, PhD, The University of Virginia, Robert M Berne Cardiovascular Research Center, 415 Lane Rd, MR5 Room 1330, Charlottesville, VA 22908; Email: wamhoff@virginia.edu. The effective start date for this position is July 1, 2006 but can be negotiated. Inquiries about specific projects may be made to: wamhoff@virginia.edu.

Postdoctoral Position. Position available now in Molecular & Cellular Cardiology, Genome Center, Davis Campus. Postdoctoral position available immediately to study the molecular biology of heat shock proteins in heart failure. Work will focus on interaction between HSP60 and other intracellular proteins, as well as the role of HSP60 in preventing apoptosis. Previous experience with animal surgery, molecular and protein techniques an asset. Cell culture experience also a plus. Please submit CV, summary of research experience and names and contact information for three

references. Salary dependent on experience. Dr. Anne A. Knowlton, Professor, Molecular & Cellular Cardiology, Genome Center, Davis, CA; phone: 530-752-5461; Email: aaknowlton@ucdavis.edu.

Postdoctoral Position: Position available now in Molecular & Cellular Cardiology, Genome Center, Davis Campus. Postdoctoral position available immediately to study the molecular biology of heat shock proteins and their interface with estrogen, aging and cardiovascular injury. Work will look at estrogen related signaling in both endothelial cells and cardiac myocytes. In addition, the postdoc will participate in an ongoing study of heat shock proteins, aging and estrogen, in vivo work on myocardial injury with ischemia and cellular work on the effect of hormones on HSP expression. Studies address both physiology and underlying mechanisms. Previous experience with animal surgery, molecular and protein techniques an asset. Cell culture experience also a plus. Salary commensurate with experience. Please submit CV, summary of research experience and names and contact information for three references to: Dr. Anne A. Knowlton, Professor, Molecular & Cellular Cardiology, Genome Center, Davis, CA; Tel.: 530-752-5461; Email: aaknowlton@ucdavis.edu.

Postdoctoral position: A postdoctoral position is available immediately in the laboratory of Sue Aicher. Studies in the lab are focused on the cellular mechanisms underlying normal and pathological function in autonomic reflex pathways. These studies use a variety of techniques including tract tracing, dual labeling immunocytochemistry, electron microscopy, optical densitometry, behavioral and physiological measurements, and single unit activity in the brain. An understanding of the normal localization of receptors within autonomic pathways is critical, but we are also interested in receptor plasticity in these systems. Current studies are examining changes in receptor density and subcellular localization after hypertension which may provide insight into the mechanisms underlying functional changes in autonomic reflex pathways. Candidates should hold a PhD in neuroscience or a related field. Previous experience with immunocytochemistry, confocal microscopy, and electrophysiology would be preferable. Send curriculum vitae, summary of research interests, and names of three references to: Sue Aicher, PhD, at aichers@ohsu.edu.

ence with immunocytochemistry, confocal microscopy, and electrophysiology would be preferable. Send curriculum vitae, summary of research interests, and names of three references to: Sue Aicher, PhD, at aichers@ohsu.edu.

Postdoctoral Position: An NIH-funded position is immediately available to study the effects of anesthetics on neurotransmission in cranial upper-airway motoneurons in vivo. A variety of experimental techniques are employed in these studies including extracellular unit recording with concurrent pressure microejection of neurotransmitter antagonists/agonists, spike-triggered averaging, immunohistochemistry, fluorescence microscopy, nerve dissection and neurogram recording, cranial neurosurgery, cycle-triggered histogram analysis of discharge patterns, mechanical ventilation, and monitoring of blood pressure, airway pressure and gas composition required for proper homeostasis of an in vivo animal preparation. The Anesthesia Research Lab cadre is made up of PhD basic scientists, clinicians, fellows, technicians, and electrical engineers. Highly motivated applicants with an advanced degree in Physiology, Pharmacology, Cell Biology, Medicine, Biomedical Engineering or a related field are encouraged to apply. Two years of funding are available with possibility of renewal upon mutual agreement. Salary and benefits will be commensurate with experience and in accordance with NIH guidelines. Interested individuals should send a cover letter, curriculum vitae, and the names and addresses of three references to Eckehard A. Stuth, MD, Department of Anesthesiology, Medical College of Wisconsin, Zablocki VA Medical Center, Research Service/151, Milwaukee, WI 53295. Email: estuth@mcw.edu.

Postdoctoral Research Fellow: An NIH-supported position is available to study epithelial cell signaling. Our laboratory uses a multidisciplinary approach including patch clamp electrophysiology, cellular imaging and biochemical techniques to study the signaling pathways regulating ion channels involved in secretion from intestinal epithelia. Ongoing studies include the differential regulation of apical and basolateral membrane K channels, basolateral membrane Cl channel activity

during changes in secretory rate and coordination of ion channel activation with mucus release. Candidate should have a PhD degree in physiology or a related discipline (or equivalent). Experience with patch clamping or imaging is preferred. Application deadline is July 31, 2006. Send curriculum vitae, including a statement of your research interests, along with names and addresses of 3 references to: Dan R. Halm, Department of Neuroscience, Cell Biology and Physiology, Wright State University, 3640 Colonel Glenn Hwy, Dayton OH 45435; Email: dan.halm@wright.edu; Fax: 937-775-3391. [AA/EOE]

Postdoctoral Positions: Department of Physiology and Biophysics, Exercise Science-Pediatric Exercise and Muscle Plasticity, University of California, Irvine, CA. Two postdoctoral positions will be available in the Multidisciplinary Exercise Science program. This program seeks candidates interested in the effects of exercise in children and skeletal muscle plasticity. The program consists of three different core programs: 1) Molecular Physiology core; 2) Systems Physiology core; and 3) the Clinical Applications core. The overall goal of this training program is to develop scientists with a strong integrative approach (molecular-to-systems physiology) in the field of exercise science. Additionally, each candidate will be provided with a rich clinical exposure to strengthen the integrative nature of the program. Applicants are sought with PhD and/or MD degrees. Salary commensurate with qualifications and experience. Candidates should send a curriculum vitae and the names of three references (please do not solicit letters) to: Dr. Kenneth M. Baldwin, Medical Science I, D-352, College of Medicine, University of California-Irvine, Irvine, CA 92697-4560; Email: kmbaldwi@uci.edu. [AA/EOE]

Faculty Positions

Chair: The University of Tennessee Health Science Center invites applications for the position of Chair in the Department of Physiology. This is a position at the level of Professor. Applicants should hold the PhD degree or equivalent. Duties include serving as Chair of

a department that has consistently ranked among the top 10 physiology departments in the country in extramural funding. The department has 19 tenure-track faculty. The successful candidate must have a strong commitment and history to excellence in research, medical education, and scholarly productivity. Administrative experience is desirable. The University has an excellent benefits package. All qualified applicants should submit a letter of application, complete curriculum vitae and three letters of recommendation to: Russell W. Chesney, MD, Chair, Physiology Chair Search Advisory Committee, P. O. Box 63647, Memphis, TN 38163. [EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA]

Chair: The Department of Molecular and Integrative Physiology. The University of Michigan Medical School is seeking an academic leader to direct the teaching and research programs of its Department of Molecular and Integrative Physiology. Qualifications include: a PhD or MD degree or equivalent, international stature as a leader in an area of Physiology, a proven record of research and innovation, demonstrated commitment to medical education and significant experience in leadership roles. Please submit your CV and response to: University of Michigan Medical School, c/o Office of the Dean, Attn: Martha Smith, University of Michigan Medical School, M4101 Medical Sciences Building I, Ann Arbor, MI 48109-0624. [AA/EOE]

Teaching Positions

Assistant Professor: Mercer University School of Medicine, Division of Basic Medical Sciences, Macon, GA, invites applications for a salaried, twelve-month, tenure-track faculty position in Medical Physiology at the Assistant Professor level. The successful candidate must have a strong commitment to excellence in medical education and will participate in an integrated, multidisciplinary, problem-based medical education program that is organ-systems based. In addition, the candidate will be expected to establish an independent research program capable of attracting extramural funding in the basic or applied biomedical sciences.

Applicants should have a doctoral degree in Physiology or the equivalent from an accredited university/college with at least three years of postdoctoral training. Preference will be given to individuals with knowledge/experience/expertise in systems physiology. Intra- and multidisciplinary bench and clinical research collaboration is encouraged and individuals with cellular, molecular, or systems-focused research interests are encouraged to apply. Mercer University School of Medicine is located one hour south of Atlanta in Macon, GA, and is a community-based medical school with 350 full- and part-time teaching faculty and approximately 260 medical students. The school's mission is to educate physicians and health professionals to meet the primary care and health care needs of rural and medically underserved areas of Georgia. A 600-bed local referral and teaching hospital is located in Macon, with additional clinical facilities in Savannah and Atlanta. <http://medicine.mercer.edu/>. For the full announcements and to apply online, please access <https://www.mercerjobs.com>. [AA/EOE/ADA].

Associate Professor/Professor: Exercise Physiology Obstetrics and Gynecology, Research Track. Saint Louis University School of Medicine, Department of Obstetrics, Gynecology and Women's Health. **Primary Responsibilities:** serve as Director of Women's Pavilion Exercise Physiology and Clinical Applications Institute; develop a comprehensive women's exercise physiology, wellness and clinical applications program; design and conduct research; supervise staff of exercise lab, (VO₂ testing, stress testing, body composition assessment); and develop wellness programs with other departments. Candidates should possess a Doctorate in Exercise Physiology or equivalent and have an established scholarly record in the area of women's health and exercise physiology. Evidence of successful research funding and extensive publications in peer-reviewed journals is required. Salary and faculty appointment will be commensurate with past experience and academic credentials. **Significant start up support will be available.** Send letter of application and CV in confidence to: Raul Artal, MD, Professor and

Chairman, Saint Louis University, Department of Obstetrics, Gynecology and Women's Health, 6420 Clayton Road, Ste. 290, St. Louis, MO 63117; Email: artalr@slucare1.sluh.edu. [EOE M/F/VAH]

Assistant Professor-Tenure Track Faculty:

The Department of Pharmacology and Physiology, Drexel University College of Medicine, invites applications from qualified individuals with a PhD, MD, or equivalent, for a tenure-track faculty position at the Assistant Professor level. Applicants would be expected to teach physiology to medical and graduate students and to also maintain an active research program. Drexel University College of Medicine has two innovative medical school curricula (an integrated and a problem-based program). Criteria for promotion and tenure recognize accomplishments in both teaching and research. For more information concerning institutional strengths and medical education at Drexel University College of Medicine see <http://www.drexelmed.edu>. Applicants should submit curriculum vitae, a statement of teaching and research interests, and the names of three references to Carol Imbesi, Department of Pharmacology and Physiology, 215 North 15th Street, Mail Stop 488, Philadelphia, PA 19102; Email: carolann.imbesi@drexel.edu. Review of applications will begin immediately and continue until the position is filled.

Assistant or Associate Professor Position in Physiology and Neurobiology:

The Department of Physiology and Neurobiology at the University of Connecticut, Storrs, invites applications for a tenure track faculty position available in Fall, 2007 at the Assistant or Associate 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. We encourage applications from individuals studying 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 Professor are expected to have a currently funded

and active research program. Review of candidates will begin on October 1, 2006 and the search will continue until the position is 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-3156, 75 North Eagleville Road, Storrs, CT 06269-3156; web: <http://www.pnb.uconn.edu>.

Assistant Professor: Assistant Professor position in the Department of Anatomy and Cell Biology at the University of Iowa, Iowa City, IA. Qualifications include a PhD, MD or equivalent, postdoctoral experience and an active research program with current or a high potential for attracting external support. To apply for this position, please send cover letter and CV to Mary Beckler, Department of Anatomy and Cell Biology, 1-100 BSB, The University of Iowa, Iowa City IA 52242 (mary-beckler@uiowa.edu). [AA/EOE] Women and minorities are strongly encouraged to apply. Applicants' credentials are subject to verification.

Instructor: Vascular Biology, Department of Physiology University of Tennessee Health Science Center Memphis. This Junior Faculty appointment is available to a highly motivated and experienced individual to work in an interdisciplinary group of vascular biologists affiliated with the Department of Physiology (ranked in the top 15 nationally) and the Vascular Biology Center of Excellence at the University of Tennessee Health Science Center Memphis. The Instructor will be responsible for coordinating an inter-laboratory project in the framework of supervisor's NIH grant studying the mechanisms with which lysophosphatidic acid (LPA) induces neointima formation via the LPA G-protein coupled receptors (LPA GPCR) and peroxisome-proliferator activated receptor gamma (PPAR γ) axis. The responsibilities include: coordinating efforts of three researchers; developing experimental protocols; analyzing, summarizing, and presenting data in weekly meetings; studying vascular smooth muscle cell phenotyp-

ic modulation using explant cultures from transgenic animals with light/fluorescence microscopy and real-time PCR analysis of a host of differentiation marker genes; supervising technician breeding and genotyping of KO/TG mouse colonies, application and development of adeno- and lentiviral systems for targeted gene delivery. Excellent written and spoken communication skills are required. The further career development of the Instructor is encouraged and support in seeking independent research funding on related areas of research will be provided and encouraged. For recent publications see *J. Exp. Med.* 199:763-774., *J. Biol. Chem.* 281(6):3398-407, and for a review *J. Cell. Biochem.* 92:1086-94.). Applicants should send their CV to: Prof. Gabor Tigyi, Van Vleet Chair, Department of Physiology, UTHSC Memphis, 894 Union Ave. Ste. 426, Memphis, TN 38163; Email: gtigyi@physiol.utmem.edu; voice: 901-448-4793. [The University of Tennessee is an EEO/AA Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services.]

Instructor: Two positions are available at the level of Instructor, non-tenure track, to work within the laboratories of Drs. David and Jennifer Pollock, starting 10/1/2006. Successful candidates must have had a minimum of three years of postdoctoral training experience in the US, have a strong publication record in the field of cardiovascular research in peer-reviewed US and/or European journals and current extramural research funding from NIH or the American Heart Association. Requirements include expertise in rodent models of acute and chronic stress, rodent surgical procedures, acute and chronic assessment of renal and vascular function, in vitro microvascular techniques, Western blotting, PCR, enzyme kinetic assays, microarray analysis and other molecular biology techniques, and excellent communication skills. Candidates should Email their CV, three letters of reference and statement of career goals to Dr. David M. Pollock: dpollock@mcg.edu. The Medical College of Georgia is an EEO/AA employer. Applications from women and minorities are particularly encouraged.

Research Positions

Scientist I-In Vivo Pharmacology: Myogen, located in Westminster, CO, is engaged in the discovery, development and commercialization of small molecule therapeutics for the treatment of cardiovascular disorders. We currently have a great opportunity for an experienced professional to join our team. You will plan, execute, participate in and interpret research of an in vivo pharmacology group dedicated to running biochemical/mechanistic screening models; proof-of-concept models for target validation; and cardiovascular disease efficacy models to evaluate discovery lead compounds. To be successful, you will also contribute to and author top quality, peer-reviewed manuscripts. Position Requirements: a PhD in a biological, physiological, or pharmacological discipline with two years of postdoctoral or equivalent experience in academic research or industry; 3+ years of acute and survival rodent surgical experience; experience with in vivo cardiovascular pharmacology; thorough understanding of cardiac and cardiovascular physiology, pathophysiology, and pharmacology; current experience in the handling and dosing of rodents and familiarity with chronic rodent models of cardiovascular disease; the ability to conduct independent investigations and performance measurements of systemic hemodynamics and cardiac performance in small animals; working knowledge of multiple techniques for dosing rodents; familiarity with compound solubilization; experience with in vivo imaging modalities, histological techniques, and the evaluation of tissue for molecular and/or biochemical endpoints; expertise with data management and reduction; a demonstrated track record of scientific productivity based on publication record, patents and funded grants. Myogen provides a competitive compensation & benefits package. Reference Job Code: SCI1123-SJA and apply online at <http://www.myogen.com>. [EOE]

Senior Researcher: Position is available to study molecular regulation of gene expression in alveolar type II epithelial cells. The initial project is to use lentiviral and adenoviral vectors to inhibit C/EBP?. Independent design, implementation and analysis

Studentship

PhD Studentships: Several PhD studentships are available at the Water and Salt Research Center, University of Aarhus, Denmark. The internationally established center is supported by the Danish National Research Foundation (Danmarks Grundforskningsfond) and research focuses on body water homeostasis, electrolyte metabolism and the renal involvement in pathophysiological conditions such as heart-, liver-, or renal-insufficiency and diabetes mellitus. We offer a high quality

research training environment coupled with modern equipment and state-of-the-art research facilities, including; a transgenic and gene knockout mouse facility, a cDNA microarray unit, and a mass spectroscopy unit. Studies at one or more of the centers international collaborators could be included as an integral part of the PhD project. Applications in the form of a recent CV and cover letter highlighting research interests can be made to WATERANDSALT@ana.au.dk. Informal enquiries can be made to the same address. ❖

MICHIGAN STATE UNIVERSITY

Cardiovascular Scientist in Inflammation

Inflammation and the role of the immune system in cardiovascular function and disease has been identified as an area of need for the biological/medical sciences at Michigan State University. The Biomedical Departments of Michigan State University have jointly opened a search for immediate applications for a **tenure-track associate or full professor position in the cardiovascular sciences**. This is one of four positions to be filled in cross-disciplinary aspects of inflammation and immunology. For the cardiovascular position, specific areas of interest include but are **not limited to:** inflammatory cell recruitment to the cardiovascular system, role of cytokines in cardiovascular function, role of the immune system in metabolic syndromes, relationship of oxidative state to immunological status, and cerebral vascular inflammation and stroke. A doctoral degree (PhD, DO, DVM or MD) and a current rank of Associate or Full Professor are required. The successful applicant will have the opportunity to join a biomedical department best-suited to their research, potential for collaboration, and ability to lead cardiovascular inflammation

research on the MSU campus. MSU cardiovascular research encompasses significant strength in different scientific areas and diseases that include hypertension, stroke, and obesity. Information on cardiovascular research at MSU, as well as current faculty and collaborations can be found at <http://cardiovascular.msu.edu>.

The applicant should submit a letter of application, curriculum vitae, statement of research goals, up to five relevant reprints and full contact information (address, e-mail and phone) for three personal references to: **Stephanie W. Watts, Ph.D., Cardiovascular Inflammation Committee Chairperson, Department of Pharmacology & Toxicology, B445 Life Sciences Building, Michigan State University, East Lansing, MI 48824-1317. Fax: (517) 353-8915; Tel: (517) 353-3724; E-mail: wattss@msu.edu.**

All application materials should be submitted electronically to wattss@msu.edu.

Applications should be received by **September 15, 2006**.

MSU IS AN AFFIRMATIVE ACTION, EQUAL OPPORTUNITY INSTITUTION.

Benos Earns President's Award for Excellence in Teaching

Dale Benos, APS President, chair of the physiology and biophysics department at the University of Alabama, Birmingham (UAB), and professor in Joint Health Sciences at UAB, and was honored at the 16th annual President's Award for Excellence in Teaching at the UAB Faculty Awards Convocation, May 4, 2006. The award recognizes full-time regular faculty who have demonstrated exceptional accomplishments in teaching. One recipient is chosen from each school and the Joint Health Sciences departments.

Benos has a commitment to teaching that spans the distance from the elementary classroom to the students pursuing doctoral degrees. Benos has been at UAB for nearly 21 years, during which time he has been credited with excellence in teaching, research and service, and also has been commended for his ability and willingness to help develop courses that address specific needs. One colleague noted Benos' dedication is clearly reflected in his ongoing efforts to prepare his students to be exemplary scientists and attain the knowledge and skills they need; and more important, "Dr. Benos is equally concerned that these students are prepared to be effective communicators and conduct themselves ethically."

Guy Fogleman to Become FASEB Executive Director

Guy Fogleman has been selected as the new Executive Director of the Federation of American Societies for Experimental Biology (FASEB). He will join FASEB on July 10. In announcing the appointment, FASEB President Bruce R. Bistran, MD, PhD called Dr. Fogleman "a proven leader with a wealth of experience in management and research." FASEB "looks forward to working with Dr. Fogleman to achieve our shared goal of increasing support for biomedical research," Bistran added.

Fogleman was formerly Director of the Biomedical Research Division and Associate Director for Human Health and Performance at NASA, where he led

NASA's biomedical and biological science and technology programs. He has conducted research at the NASA Ames Research Center on the origins of life and the physics of particles in microgravity. Prior to working for NASA, he served as associate professor at San Francisco State University and research associate at Tri-University Meson Facility at the University of British Columbia, where he conducted research in theoretical elementary particle physics. Fogleman has a PhD in physics, MA in mathematics and MS in physics from Indiana University in Bloomington and has served as US co-chair of the US-Russia Joint Working Group on Space Life Sciences and US delegate to the multilateral International Space Life Sciences Working Group. "I am looking forward to serving as Executive Director," Fogleman stated. "FASEB is a great organization with a distinguished history and an important mission." Enhancing synergy among the member societies will be a top priority, he continued.

Gunter-Smith Taking Provost Position

Effective July 1, Pamela J. Gunter-Smith, Professor of Physiology in the Biology Department, Spelman College will be leaving to take on new duties as Provost and Academic Vice President at Drew University, Madison, N.J.

Gunter-Smith has held the Porter professorship in the Department of Biology at Spelman College since her arrival at the College in 1992. She has served as department chair (1992-2002), associate provost for science and mathematics (2002-2003), and program director for Spelman's Center for Biomedical and Behavioral Research (2002-2003). From 1993-2003, Gunter-Smith was program director for the Howard Hughes Medical Institute (HHMI) Biomedical Program at Spelman College. The HHMI is a Bethesda, Maryland-based non-profit biomedical research organization. In 2003, Gunter-Smith was named an American Council on Education Fellow at the University of Miami, where she worked with the school's president, Donna E. Shalala.

At Drew University, Gunter-Smith will have responsibility under Drew's president for planning, programs, personnel and budgets in the University's

three schools—the College of Liberal Arts, Theological School, and Caspersen School of Graduate Studies. Responsible for the administrative and academic life of the University, she will foster collaboration among the University's three schools, focus on strengthening existing programs while examining the feasibility of new ones at both the B. A. and M. A. level, and work with faculty to explore the ways in which teaching and scholarship can support each other.

Guggino New Director of Physiology at Johns Hopkins Medicine

William B. Guggino has been named the director of physiology at The Johns Hopkins University School of Medicine, effective immediately.

Guggino has spent most of his professional career at Hopkins, both as a teacher and researcher.

"Dr. Guggino's commitment to science and to our medical school is equaled only by the passion he has for teaching, and for the mentoring of the brilliant students who have been fortunate enough to study and work with him," said Edward Miller, Dean and CEO of Johns Hopkins Medicine. "He has arrived at this post through years of dedicated service to this institution, his students and to the body of scientific knowledge he has helped further, and his expansive professional experiences, both in the lab and the classroom, will undoubtedly continue to benefit faculty, staff and students."

In 1992, Guggino, along with Peter Agre, authored a seminal paper published in *Science*, which detailed the discovery of the very first water channel protein. That line of research, 11 years later, won Agre the Nobel Prize in Chemistry.

Guggino's educational credentials include a BS in biology from Brooklyn College, as well as an MS from Long Island University and a PhD from the University of North Carolina at Chapel Hill, both in comparative physiology.

For 24 years Guggino has been the course director in organ systems physiology and histology and has served as the Director of the Curriculum for First Year Medical Students. He is also a former recipient of the Hopkins Excellence in Teaching Award.

The Physiological Society (UK) Appoints New Chief Executive

The Physiological Society is delighted to announce that Michael Collis has been appointed as the Society's new Chief Executive.

As Chief Executive, Michael Collis will be responsible to help shape and deliver the strategic vision of the Society, interacting closely with the Trustees and Executive and maintaining well-established links with other learned societies. We have been fortunate to have recruited an established scientist with a long-standing interest in physiology and a broad range of experience of academia and industry.

Michael Collis has spent the majority of his research career in industry, where he held senior research management positions at Wyeth, ICI and Pfizer and advanced 16 novel drug candidates into clinical development. As lead of the Academic Liaison and Collaboration group for Pfizer, Michael established numerous links with academic researchers and learned societies. He has published extensively, particularly on the role of purinergic receptors in the cardiovascular system and has served on the editorial boards of *Hypertension* and *British Journal of Pharmacology*. Michael is a strong believer in the importance of integrative Physiology and is currently a member of the BBSRC Studentship and Fellowships Committee, MRC Physiological Systems and Clinical Sciences Board and the RAE (2008) Pre-clinical and Human Biological Sciences panel.

Michael Collis took up office in early May and is based at the Society's London office, PO Box 11319, London, WC1X 8WQ.

The Physiological Society (UK) Elects Professor Ole Petersen, FRS as President

The Physiological Society is delighted to announce the election of Professor Ole Petersen FRS as the Society's new President.

Ole Petersen is currently George Holt Professor of Physiology and MRC Professor at the University of Liverpool and holds the following honorary execu-

tive positions: Vice-President of the Royal Society, Secretary General of the International Union of Physiological Sciences (IUPS) and Chair of *Physiological Reviews* European editorial committee. Ole received his MB ChB (1969) and MD (1972) from the University of Copenhagen and was appointed in 1975 as Symers Professor of Physiology and Head of the Department of Physiology in the University of Dundee. He was elected as a Fellow of the Academy of Medical Sciences (FMedSci) in 1998, The Royal Society in 2000, Royal College of Physicians London (FRCP) in 2001 and has been the recipient of numerous other prestigious awards and lectures. Ole Petersen's current MRC Programme grant focuses on pancreatic acinar physiology and pathophysiology, with a particular interest in the regulation of ion channels and Ca²⁺ signalling in secretory cells. He has published extensively in the field of physiology and has been a long-standing supporter of the discipline. Ole played key roles as a member of Council (formerly Committee) and as International Secretary from 1992-1998.

Ole Petersen will take up his post in July 2006.

Phillips Research Professor at Stem Cell Laboratory

M. Ian Phillips joins Keck Graduate Institute as Research Professor, Stem Cell Laboratory.

Phillips joined Keck Graduate Institute in March 2006 from the University of South Florida where he was Professor of Physiology and Biophysics in the College of Medicine and had earlier served as Vice President for Research. Before Phillips moved to the University of South Florida, he was Associate Vice President for Research at the University of Florida and served as Chairman of Physiology there for 20 years.

Phillips has a longstanding interest in prevention and treatment of cardiac damage by ischemia and has recently focused his research on regulated gene and stem cell-induced cardioprotection. Phillips will initiate KGI's efforts in stem cell research; his lab will work not only on prevention and treatment of heart damage, but also on cures for type 1 diabetes.

Kayode Oke Adeniyi accepted the position of Fellow, Institute of Food, Nutrition & Human Health, Massey University, Wellington, New Zealand. Adeniyi had previously been associated with the School of Medicine & Health Sciences, University of Papua New Guinea, Port Moresby, New Guinea.

Govindasamy Balasekaran recently affiliated with the National Institute of Education as a Postdoctoral Fellow, Singapore. Balasekaran was previously affiliated with the Department of Human Genetics, University of Pittsburgh, Pittsburgh, PA.

Ismael Mohammed Bin-Jaliah has accepted the position of Assistant Professor, King Khalid University, Department of Physiology, College of Medicine, Abha, Asir, Saudi Arabia. Bin-Jaliah was formerly affiliated with the Department of Physiology, Birmingham University, Highgate, Birmingham, England, UK.

Madhusudana Rao Chaluvadi has affiliated with the Department of Pharmacology, Emory University, Atlanta, GA. Prior to his new position, Chaluvadi was associated with the Department of Biology and Biomedical Science, Glasgow Caledonian University, Glasgow, Scotland, UK.

Anthony C. Chao is a Senior Scientist with FivePrime Therapeutic Inc., Department of ASSAY Development & Screening, San Francisco, CA. Chao had previously been associated with Amphora Discovery Corporation as a Senior Scientist II, Mt View, CA.

David J. Culp has joined the University of Florida, College of Dentistry, Gainesville, FL, as Professor. Prior to his new assignment, Culp was an Associate Professor affiliated with the Center of Oral Biology, University of Rochester Medical Center, Rochester, NY.

Hayat Dagher is currently a Postdoctoral Fellow, Department of Medicine, Monash University, Clayton, Australia. Prior to his new affiliation, Dagher was associated with the Department of Pediatrics, University of Wisconsin, Madison, WI.

Yukisato Ishida is currently Professor, Bunkyo Gakuin University, Faculty Health Science Technology,

Department of Physical Therapy, Fujimino-shi, Saitama Pref., Japan. Prior to his new position, Ishida was a Visiting Professor, Department of Molecular & Cellular Physiology, University of Cincinnati College of Medicine, Cincinnati, OH.

Dexter LeMarvin Lee accepted the position of Assistant Professor, Department of Physiology/Biophysics, Howard University, Washington, DC. Lee was formerly a Postdoctoral Fellow, Department of Physiology, Medical College of Georgia, Augusta, GA.

Giovanni Piedimonte has accepted a position as Professor & Chair,

Department of Pediatrics, West Virginia University School of Medicine, Morgantown, WV. Piedimonte, as an Associate Professor of Pediatrics & Molecular & Cell Pharmacology, was previously affiliated with the Department of Pediatrics Pulmonary Division, University of Miami School of Medicine, Miami, FL.

Donato A. Rivas has affiliated with RMIT University School of Medical Sciences Bundoora, Australia. Rivas was previously with the Department of Kinesiology, California State University, Westminister, CA.

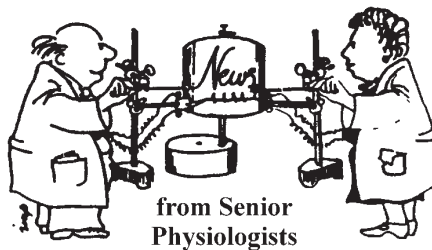
Sueko Sagawa, a Professor, has affiliated with the Faculty of Sports Science, Kyusyu Kyoritsu University, Faculty of Sports Science, Kitakyushu, Japan. Prior to his new position, Sagawa was associated with the Department of Physiology, National Institute of Fitness and Sports, Kanoya, Japan.

Thomas B. Walker has joined the Air Force Research Lab, Air Crew Protection, as a Research Physiologist, Brooks City-Base, TX. Previously, Walker was a doctoral student at the University of New Mexico, Albuquerque, NM, where he recently attained his PhD degree.

Senior Physiologists' News

Letter to Julio Cruz

Aron B. Fisher writes: "Thank you for the good wishes from APS. As you may know, I have been a member for about 40 years and value that membership more than any other. Although a 70th birthday seems an auspicious occasion, I have not yet made age-related concessions and continue with an active program as the Director of the Institute for Environmental Medicine and Professor of Physiology. My major activities are related to research in the field of cellular and molecular basis of lung function with emphasis on lung surfactant, oxidant stress, and endothelial cell signaling. I currently am the PI of two Program Project (P-01) grants, an R-01 grant, and an NRSA (T-32) training grant, all from the NHLBI. I currently serve on an NIH study section, am an associate editor of *Antioxidants and Redox Signaling*, and on the editorial board of the *AJP: Lung Cell and Molecular Physiology*. So, I manage to keep busy, although perhaps I'll downsize in the next few years and spend more time with my wonderful wife of 48 years, four children, eight grandchildren, and my hobbies of music, gardening, and art. Thank you again for the



birthday greetings and for your efforts to keep senior physiologists involved in our society."

Letter to Beverly Bishop

Newman L. Stephens writes: "Thank you for your greetings and your thoughtfulness.

"Currently, I am working as a full-time Professor in the Department of Physiology. This includes medical undergraduate and graduate basic science teaching. I have two PhD students, one MSc, and one research associate under my supervision. Funding for my research continues from Canadian Federal (Canadian Institutes for Health Research) and American sources in the amount of \$300,000 per annum.

"I continue to publish, as you may see from the attached CV. We have three papers submitted and under editorial

consideration as of now.

"I am organizing an international symposium on 'Asthma: Chronic Inflammation, remodeling and Hyperreactivity.' This will be held in Antigua (The Caribbean's) in November this year. I held an international symposium on 'Models of Smooth Muscle Contraction' last year at Hecla Lodge, Manitoba. The proceedings were published in the *Canadian Journal of Physiology and Pharmacology (CJPP)*.

"More to the kindness of friends than to any great brilliance on my part, I was given the Rhodarte Merit Award for contributions to science at the recent meeting of the American Thoracic Society. I was also given an award from the International Academy of Cardiovascular Sciences, and the Frein Research Award in Australia.

"With respect to words of wisdom for younger colleagues I would say 'do whatever turns you on,' don't settle for the expedient or anything whose end result is material returns. There are two qualities which I regard as the greatest for scientists. One is wisdom which is distilled from knowledge, and the other is compassion. Strangely enough these have accrued from studies in Tibetan spiritualism and a layman's approach to quantum physics." ♦

Physics in Molecular Biology

Kim Sneppen & Giovanni Zocchi
New York, NY: Cambridge Univ. Press,
2005, 319 pp., index, \$70.00.
ISBN: 0-521-84419-3.

Theoretical physicist Kim Sneppen (Niels Bohr Institute) and experimental physicist Giovanni Zocchi (UCLA) have teamed up to produce a textbook on biophysics intended for third- and fourth-year physics students. The book may be viewed as yet another testimony of the vibrant biophysics community which has emerged in Denmark. The book is not aiming at an encyclopedic coverage of biophysics but to teach basic physical ideas relevant to molecular biology via specific examples. Tools are introduced as needed while the elements of statistical physics are summarized in an appendix. Statistical physics is the toolbox of choice since biological systems consists of a large number of interacting molecules. Basically one is looking for the states and configurations which maximize the total entropy S_{tot} (which is equivalent to minimizing the Gibb's energy G of the system). Also single molecules like proteins may consist of hundreds of subunits interacting with each other and with solvent molecules. It is quite hopeless to approach such systems with quantum mechanical *ab initio* methods, and furthermore, we are seldom interested in that detailed a description were it even possible. For instance, for proteins we might be interested in various conformational structures. When an "exact treatment" is too forbidding we have to rely on artful simplifications which make calculations feasible while still retaining the essential features of the problem. To succeed in such endeavours is the secret of (bio)physics.

One of the basic simplified models is that of a polymer as a chain of more or less randomly oriented units. Sneppen and coworkers have mimicked the effect of hydrogen bonds on polymer folding using such a simplified model by associating every polymer unit with a spin which could be oriented along the x -, y - or z -axis. Making the neighbouring units interact via the oriented "spin" is shown to generate secondary structures (alpha and beta helices). While this model requires simulations, many of the examples discussed in the book are based on back-on-the-envelope type calculations and this applies also to the exercises dispersed throughout the text. The ability to make quick estimates of typical quantities involved in problems is one of the more useful talents to acquire. Biophysical problems can be especially tricky in this respect since we may have many interactions balancing each other (van der Waals forces, salt bridges, H-bonds, hydrophobic forces, disulfide bridges), and whether the balance tips this or that way makes all the difference. A central agent here is the thermal fluctuations whose characteristic energy is kT , or 1/40 eV (at room temperature), to be compared with a typical energy of 1 eV for covalent bonds. From this follows the dramatic influence of an aqueous environment on interactions since it reduces the electrostatic energy by a factor of 80 (the dielectric constant of water) thus amplifying the importance of the fluctuations. One intriguing effect of water is the cold melting of proteins which is described by another simplified model. Discussing the intricate role of hydrophobicity for protein structures the authors remark (p. 89) that "the hydrophobic interaction occupies, in life sciences, a position of importance comparable with any of the four fundamental interactions in the physical sciences. Yet

our knowledge is very limited. We do not, for example, really know its range". So that's a hint for physicists looking for big challenges!

The book focuses on genes, RNA, DNA, proteins, molecular networks and finally evolution including the popular Bak-Sneppen model. The *pièce de résistance* is chapter 7 devoted to the genetic regulation of the lambda-phage switch which is an example of the functioning of molecular networks which is the subject of the following chapter. The book thus presents an interesting interplay between component biology and systems biology, and demonstrates how semi-quantitative models may facilitate the understanding of how the components fit together in a system.

I would recommend it to researchers, and as supplementary reading for students with the proviso that it requires a firm grasp of the elements of statistical physics and thermodynamics. The advantage of the book is that it quickly introduces research topics and the tools to tackle the problems. The book is packed with facts in a condensed monographic style yet the biological details are explained as needed and the book can therefore be considered to be largely self contained. A number of printing errors may however create some traps for the novice (lack of proofreading?). Every chapter ends with full bibliographic references to the original literature. There is also a brief glossary of important concepts at the end. Nevertheless it is advisable to have some general introductory work on biophysics near at hand when reading the book (of recent introductory works I may mention the ones by Rodney Cotterill, Meyer B Jackson and Michel Daune). ❖

Frank Borg

Univ. of Jyväskylä, Finland

Books Received

Exercise Biochemistry.

Vassilis Mougios.
Champaign, IL: Human Kinetics, 2006,
349 pp., illus., index, \$79.00.
ISBN: 13: 978-0-7360-5638-0.

My Other Body.

Ann Pai.
Overland Park, KS: Sunspot Press,
2006, 332 pp., \$15.00.
ISBN: 0-9772045-0-2.

Nutrition and Clinical Management of Chronic Conditions and Diseases.

Felix Bronner, (Editor).
Atlanta, GA: CRC Press/Taylor &
Francis Group, LLC, 2006, 282 pp.,
illus., index, \$139.95.
ISBN: 0-8493-2765-2.

Physiology Case Studies in Pharmacy.

Laurie Kelly McCorry, Ph.D.
Washington, DC: American
Pharmacists Association, 2006, 208 pp.,
index, \$35.00.
ISBN: 1-58212-089-7.

Reflections of a Physician in His Ninety-Seventh Year.

David I. Abramson, M.D.
Coral Springs, FL: Llumina Press,
2005, 211 pp., illus., \$12.95.
ISBN: 1595260250.

The Wine Wizard Peter Wagner



Peter Wagner

(South Australian) Command Shiraz (\$60). "Command" is their term for "reserve". This is extraordinary wine, a must for special occasions. It will cellar for 15 years or more (We just opened a 1992 version and after an hour in a carafe it was truly special). This wine is absolutely reliable, has been for 20 years, and even at this price better in my experience than most wine twice as expensive. Amazing power with elegance (one of very few wines that can claim both), rich, complex with plum, black cherry and blackberry and a hint of eucalyptus/mint. Oak is in the background. Great structure with firm, balanced tannins and good acid to give longevity. This wine should not be drunk for at least three years (sorry). It is still very young, and in a cool dark cellar will become a stunning wine if you can wait.

Wine availability: I know how hard it can be to find specific wines. I have absolutely NO financial ties to San Diego Wine Co, where I tend to find, try and buy most wines for myself as well as for *The Physiologist*, but to help you locate the wines I have suggested, their website is: <http://www.sandiegowine.net>

Depending on the state you inhabit, they may be able to help you. ❖

Whites:

Spinyback 2005 New Zealand Sauvignon Blanc (\$7-9). A little crisper (higher acid) and less viscous than (previously recommended) Villa Maria, but very clean and full of grassy passionfruit flavors. Great at this price if you can find it.

Wishing Tree 2005 Western Australia Unoaked Chardonnay (\$8-10). Pure tropical and citrus fruit, crisp acidity but viscous, rich and very clean. Really worth a look even if just to see what chard grapes taste like when the oak is absent. But I like it as a real wine, not as a curiosity.

Reds:

Rancho Zabaco 2004 "Dancing Bull" Zinfandel (\$6-8). Bright red cherry and raspberry fruit, good acid, briary, spicy, light oak and tannin. Extremely good value. Ready now, not to be aged more than a year.

Cycles Gladiator 2004 California Central Coast Syrah (\$8-10). Straightforward plummy, rich, accessible fruit with nice spice and vanilla oak to balance. Soft, light tannins, not too tart. Very easy to drink, great with BBQ's of all species. Drink now, don't lay away.

Adelaida Schoolhouse 2003 Paso Robles "Recess Red" (\$10-12). Very accessible bright red/black cherry fruit with just enough oak and acid to

give it structure. Very easy to drink, great summer BBQ wine, not one to age.

Twenty Bench 2004 Napa Cabernet (\$14-16). What a surprise at the price. Real structure, great black currant fruit and vanilla, nice herbal green olive thread. Good acid and tannin, nice balance and length. Worth drinking now and over the next three years or so.

Elderton 2003 Barossa Valley (South Australian) Shiraz (\$24). Definitely upscale, will cellar well for perhaps 5 years, with soft, very rich jammy shiraz fruit, nice dill/vanilla from the oak, beautiful balance, light tannins. Excellent length, worth the price, lovely right now.

Elderton 2002 Barossa Valley



Moving?

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

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

September 2-6

European Respiratory Society 2006 Annual Congress, Munich, Germany. *Information:* Internet: <http://www.ersnet.org>.

September 3-8

2006 Gordon Research Conference on Molecular Mechanisms in Lymphatic Function and Disease, Les Diablerets, Switzerland. *Information:* Internet: <http://www.grc.org/>.

September 6-9

Cardiac Energy Metabolism in Heart Failure: From Concepts to Therapies, Semiahmoo Resort, near Seattle, Washington, USA. *Information:* Society for Heart and Vascular Metabolism. Email: heartmetabolism@yahoo.com; Internet: <http://www.heartmetabolism.org>.

September 6-9

1st World Congress on Controversies in Neurology, Berlin, Germany. *Information:* Internet: <http://www.comtecmed.com/cony/>.

September 7-10

Genomic Perspectives to Host Pathogen Interactions, Hinxton, Cambridge, United Kingdom. *Information:* Cold Spring Harbor Laboratory, Meetings & Course Program, PO Box 100, 1 Bugtown Road, Cold Spring Harbor, NY 11724-2213. Tel: 516-367-8346; Fax: 516-367-8845; Email: meetings@cshl.edu; Internet: <http://www.cshl.edu/meetings>.

September 14-17

AACVPR 21st Annual Meeting - Promoting Health and Preventing Disease, Charleston, WV. *Information:* Internet: http://www.aacvpr.org/secure/annualmeeting/2006/register_2006.cfm.

September 16-20

5th European Congress of Biogerontology, Istanbul, Turkey *Information:* Internet: <http://www.biogerontology2006.org>.

September 26-29

16th International Congress on Care of the Terminally Ill, Palais des Congrès in Montréal, Canada. *Information:* Tel.: 514-481-7408, ext. 227; Internet: <http://www.pal2006.com>.

September 28-October 1

Integrative Approaches to Brain Complexity, Hinxton, Cambridge, United Kingdom. *Information:* Cold Spring Harbor Laboratory, Meetings & Course Program, PO Box 100, 1 Bugtown Road, Cold Spring Harbor, NY 11724-2213. Tel: 516-367-8346; Fax: 516-367-8845; Email: meetings@cshl.edu; Internet: <http://www.cshl.edu/meetings>.

October 12-15

ISN Nexus Symposium - The Bone and the Kidney, Copenhagen, Denmark. *Information:* Email: info@isn-online.org; Internet: <http://www.isn-online.org/nexus/bonekidney>.

October 20-23

13th International Conference of Biochemistry of Exercise, Seoul, Korea. *Information:* Chang Keun Kim, Ph.D., Korea National Sport University, 88-15 Oryun-dong, Songpa-gu, Seoul, Korea. Tel: +82 2 410 6815; Fax: +82 2 418 1877; Email: ckkim2006@yahoo.co.kr; Internet: <http://www.icbe2006-seoul.org/program.html>.

October 26-29

Joint World Congress on Stroke: International Stroke Society, Mediterranean Stroke Society and Southern African Stroke Foundation, Cape Town, South Africa. *Information:* Global Congress Organizers and Association Management Services, 17 Ru du Cendrier, P.O. Box 1726, CH-1211 Geneva 1, Switzerland. Tel: +44 22 908 0488; Fax: +44 22 732 2850; E-mail: stroke2006@kenes.com; Internet: <http://www.kenes.com/stroke2006>.

November 1-4, 2006

American Society of Matrix Biology (ASMB) Biennial National Meeting 2006, Nashville, Tennessee. *Information:* Email: nanette.bahlinger@vanderbilt.edu; Internet: <http://www.asmb.net/>.

December 6-10

Humanizing Model Organisms to Understand Pathogenesis of Human Disease, Hinxton, Cambridge, United Kingdom. *Information:* Cold Spring Harbor Laboratory, Meetings & Course Program, PO Box 100, 1 Bugtown Road, Cold Spring Harbor, NY 11724-2213. Tel: 516-367-8346; Fax: 516-367-8845; Email: meetings@cshl.edu; Internet: <http://www.cshl.edu/meetings>.

2007

March 5-9

10th Tamagawa-Riken Dynamic Brain Forum – DBF'07: In search of a new paradigm for approaching the brain as a complex system, Hakuba, Nagano Prefecture, Japan. *Information:* Internet: <http://www.tamagawa.ac.jp/sisetu/gakujutu/brain/dbf2007/index.html>.

April 21-25

World Congress of Nephrology 2007, Rio de Janeiro, Brazil. *Information:* Email: info@isn-online.org; Internet: <http://www.wcn2007.org>.

August 23-26

2007 World Conference of Stress, Budapest, Hungary. *Information:* Congress Secretariat, Diamond Congress Ltd., H-1255 Budapest, P.O. Box 48, Budapest 8, Hungary. Tel.: +36 1 214 7701; Fax: +36 1 201 2680; Email: diamond@diamond-congress.hu; Internet: <http://www.stress07.com/index.html>.

September 16-19

10th International Conference on Endothelin, Bergamo, Italy. *Information:* Francesca Di Fronzo, Mario Negri Institute for Pharmacological Research, via Gavazzeni, 11-24125 Bergamo, Italy. Tel.: +39 035 319888; Fax: +39 035 319331; Email: difronzo@et-10.it; Internet: <http://www.et-10.it>

Physiology

Journals of The American Physiological Society

The Journal Publishing Program of the American Physiological Society (APS) covers the entire spectrum of physiology—examining major physiological systems, from the cellular and molecular to the organ and system level. These prestigious peer-reviewed journals are available in print and online. An online subscription to the APS journals provides you with immediate access to the latest issue of the journal as well as with continued access to all content published previously online. Subscribers to the online journals also get access to the fastest possible publication of original research articles through our **Articles in PresS** feature—articles published in manuscript form within a few days of acceptance. The APS journal titles are

- *American Journal of Physiology (AJP consolidated)*
 - *AJP-Cell Physiology*
 - *AJP-Endocrinology and Metabolism*
 - *AJP-Gastrointestinal and Liver Physiology*
 - *AJP-Lung Cellular and Molecular Physiology*
 - *AJP-Heart and Circulatory Physiology*
 - *AJP-Regulatory, Integrative and Comparative Physiology*
 - *AJP-Renal Physiology*
- *Journal of Applied Physiology*
- *Journal of Neurophysiology*
- *Physiological Genomics*
- *Physiological Reviews*
- *Physiology* (formerly *News in Physiological Sciences*)
- *Advances in Physiology Education*



The APS Journal Legacy Content

FREE to APS Members

One-Time Fee of \$2000—to Nonmembers

The APS Journal Legacy Content is an “online package” of over 100 years of historical scientific research from the American Physiological Society’s (APS) 14 research journals that can be purchased separately at a one-time charge for perpetual use (**FREE to APS Members**). It is not sold as a subscription; instead, nonmembers pay once (\$2,000) for the perpetual access to the online content from all APS journals from 1898 to 1996-1998 (depending on the journal). This content goes back to the first issue of each of the APS journals—including APS’s first journal, the *American Journal of Physiology*, first published in 1898. The Legacy Content can be viewed as completely searchable scanned images of the printed pages. (find more info at: www.the-aps.org/publications/legacy)



American Physiological Society

9650 Rockville Pike, Bethesda, MD 20814-3991 (USA)

Tel: (301) 634-7180 • Fax: (301) 634-7241 • E-mail: subscrip@the-aps.org • Web: www.the-aps.org



MEMBERSHIP APPLICATION FORM

The American Physiological Society

1. Check membership category you are applying for: Regular Affiliate Student
2. Do you currently hold membership in the APS? Yes No
3. If you answered yes to above, what is your category of Membership? _____ Year elected? _____
4. Name of Applicant: _____
Last Name or Family Name / First Name / Middle Name
5. Date of Birth _____ / _____ / _____ Optional: Male Female
Month / Day / Year
6. Institution Name _____ Department _____
(Please do not abbreviate Institution Name)
7. Institution Street Address _____
8. City/State/Zip/Country _____
9. Home Address (**Students only**) _____
10. Work Phone _____ Home Phone _____
11. Fax _____ E-mail _____

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

Dates**	Degree	Institution	Major Field	Advisor
---------	--------	-------------	-------------	---------

13. **WHAT IS YOUR SECTION AFFILIATION?** Please identify and rank up to three sections to which you desire affiliation. (e.g., 1 = primary affiliation, 2 = secondary affiliation, 3 = tertiary affiliation). **There can be only one "Primary" affiliation.**

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

14. **DO YOU WORK IN INDUSTRY?** YES NO

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

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

#1 Sponsor Name _____

Mailing Address _____

Phone _____

Fax _____

E-mail _____

Sponsor Signature* _____

#2 Sponsor Name _____

Mailing Address _____

Phone _____

Fax _____

E-mail _____

Sponsor Signature* _____

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

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

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

16. OCCUPATIONAL HISTORY [Check if student]

Current Position:

Dates	Title	Institution	Department	Supervisor
-------	-------	-------------	------------	------------

Prior Positions:

Dates	Title	Institution	Department	Supervisor
-------	-------	-------------	------------	------------

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

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

18. DOCTORAL DISSERTATION TITLE (if applicable):

19. POSTDOCTORAL RESEARCH TOPIC (if applicable):

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

Mailer Meeting (Which meeting? _____) Colleague Other _____

Mail your application to: Membership Services Department, The American Physiological Society
9650 Rockville Pike, Bethesda, Maryland 20814-3991 (U.S.A.)
(or fax to 301-634-7241) (or submit online at: www.the-aps.org/membership/application.htm)

Send no money now—you will receive a dues statement upon approval of membership.

Approval Deadlines: Membership applications are considered for approval on a monthly basis.

Questions? Call: 301-634-7171, Fax: 301-634-7241, E-mail: members@the-aps.org, Web: www.the-aps.org