



The Physiologist

INSIDE

**APS and TPS
Announce the Joint
Publication of
*Physiological
Reports***
p. 110

**Pan-American
Congress of
Physiological
Sciences**
p. 113

**165th APS
Business Meeting**
p. 114

**Experimental
Biology 2012 Recap**
p. 124

**Public Outreach—A
Toolkit for
Investigators**
p. 148

**Sir Andrew Fielding
Huxley
(1917-2012)**
p. 151

APS Celebrates 125 Years

The Experimental Biology meeting in San Diego provided the backdrop for the Society's celebration of 125 years of existence. As APS President Joey Granger noted in his welcome comments, "One-hundred and twenty-five years ago, the American Physiological Society held its organizational meeting at Columbia Univ. College of Physicians and Surgeons." He continued by saying that "On May 23, 1887, S. Weir Mitchell, Henry Newell Martin, and Henry Pickering Bowditch sent a letter to physiologists proposing the formation of a physiological society and subsequent participation in the Congress to be held in Washington, DC. On December 30, 1887, 17 physiologists met at the College of Physicians and Surgeons of Columbia Univ. to organize the Society."

The scientific origins of the founding members of the APS were in England, France and Germany and more specifically in the laboratories of Michael Forster, Claude Bernard, and Carl Ludwig. Just as American physiology started in the labs of Europe, many of today's physiologists started their careers in US laboratories. Consequently, the Society issued invitations to physiological societies from around the world to participate in the 125th Anniversary Meeting as a guest society. As noted in Table 1, 15 societies accepted our invitation to participate in the meeting as an APS Guest Society.

Granger extended "our sincere thanks to each and every one of you for participating in this very special event in our history." He also noted that "Over the past 125 years, physiology has contributed significantly to the advance of knowledge and that it is our belief that we can make life better through advancing knowledge

about the science of life."

The focus of the Society's history was continued when Granger introduced the Society's Walter B. Cannon Memorial Lecturer sponsored by Sucampo AG. Cannon's research focused on the concept of the emergency function of the sympathetic nervous system which contributed to the development of the key physiological concept of homeostasis. He also served the Society as its 6th President (1914-1916) and provided service to the Society for over 40 years. In a similar manner, this year's Cannon Lecturer L. Gabriel Navar was the Society's 71st President (1998-1999) and has provided extensive service to the APS over the course of his membership. His Cannon Lecture was titled "The Wisdom of the Body Revisited: Tribute to Walter B. Cannon and His Concept of Homeostasis as Applied to Pathophysiology of Hypertension."

Following the Cannon Lecture, the Society celebrated the 125th Anniversary with a Beach Party on the North Embarcadero. A lighted ball hovered over the festivities which included music, food and drink, games and ample opportunity for attendees to mingle and meet their colleagues. A high point was the gathering of 21 APS Presidents for a group picture and the singing of Happy Anniversary.

Recognition of the Society's 125th Anniversary was also noted during Past President Peter Wagner's introduction of the Henry Pickering Bowditch Lecture presented by Mingyu Liang. Bowditch was chosen the first President of APS at the organizational meeting in 1887. He served in 1888 and again from 1891 to 1895,

(continued on page 107)

The Physiologist

Contents

APS News

APS Celebrates 125 Years	105
APS and TPS Announce the Joint Publication of <i>Phys. Reports</i>	110
Thomson Reuters/ISI Releases 2011 APS Journal Impact Factors	110
<i>Physiological Reviews</i> Holds European Editorial Board Meeting in Sweden	111
The Physiological Society Recognizes the APS 125th Anniversary	112
Pan-American Congress of Physiological Sciences	113
165th APS Business Meeting	114

Experimental Biology 2012

Barrett Receives Schmidt-Nielsen Distinguished Mentor and Scientist Award at EB 2012	124
Uno Receives 5th Benos Early Career Professional Service Award	125
Sweeney Receives Second ADInstruments Macknight Progressive Educator Award	126
Novel Disease Model Awards Granted to Graduate Student and Postdoctoral Fellow	127
Undergraduate Students Receive Bruce Awards for Excellence in Undergraduate Research	127
2012 APS/NIDDK Minority Travel Fellows Attend EB	129
UGSRFs Attend EB	131
Undergraduate Research Highlighted at EB Session	132
Univ. of Missouri-Columbia Students Win Second Video Contest	133
2011 Frontiers in Physiology Teachers Complete Fellowship Year	134
Learning How to Share the PhUn at the EB 2012 Physiology Understanding Week Training Session	135

Membership

New Regular Members	136
New Graduate Student Members	137
New Undergraduate Student Members	138
New Affiliate Member	138
Recently Deceased Members	138

Education

APS Promotes Physiology to Science Educators at NSTA Conference in Indianapolis	139
APS Presents Awards to Outstanding High School Students at the 63rd ISEF	140
APS Online Professional Skills Training Course Update	140
APS 2012 Science Fairs	141
APS Participates in 26th Annual HAPS Conference	142

Mentoring Forum

Social Media for the Physiologist—A Modern Utopia or a Brave New World?	142
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Science Policy

NIH Programs and Policies Updates from the Institutes	144
Update on FY 2013 Funding	147
Public Outreach—A Toolkit for Investigators	148

APS-AAAS Mass Media Fellow

A Scientist's Defining Summer	149
-------------------------------	-----

Obituary

Sir Andrew Fielding Huxley	151
----------------------------	-----

People & Places

APS Members Elected to NAS	151
AAAS Elects APS Members	151
Garami Selected for APS Perkins Memorial Award for International Physiologists	151

Senior Physiologists' News

	152
--	-----

Calls for Papers

	152
--	-----

Book Reviews

	153
--	-----

Positions Available

	155
--	-----

The Wine Wizard

	156
--	-----

Meetings & Congresses

	157
--	-----

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a total of six years. Wagner indicated that Bowditch's research touched on a wide variety of subjects including indefatigability of nerves, the function of cardiac muscle, ciliary motion, the knee-jerk response and the growth of children. Liang's Bowditch Lecture was titled "MicroRNAs and Systems Molecular Medicine."

During the course of the meeting, the APS leadership met with representatives of the Physiological Society of Japan, The Physiological Society (UK) and the Brazilian Society of Physiology. The APS Presidents met with Professors Yoshihiro Ishikawa and Yoshinori Marunaka to discuss issues of common interest in relation to meetings and publications. The full APS Council met with the leadership of The Physiological Society (TPS) to discuss the opportunities for collaborative interactions, extending our symposium exchange program to areas of collaboration in education and publication. As noted by President Joey Granger during his State of the Society remarks at the APS Business Meeting, the APS and TPS are in discussions related to the launch of a joint open access journal to serve the international physiology community. The APS-TPS discussions also focused on opportunities to assist physiologists in developing countries, complementing efforts of the IUPS. Meetings with the Brazilian Society of Physiology focused on plans for the first ever Pan-American Congress of Physiological Sciences to be held in Iguassu Falls, Brazil, August 2-6, 2014. The theme of the Congress is "Physiology without Borders." (see page 113).

In commemoration of the Society's 125th Anniversary, the APS staff worked with the editors, sections, Council and the History of Physiology Interest Group to identify the most significant events in our 125 year history. The results were incorporated into a 14 panel Timeline of Physiology which was displayed in the Sails Pavilion, San Diego Convention Center. The individual panels can be viewed on the APS website at <http://www.the-aps.org/fm/125th-APS-Anniversary/125th-Timeline>.

Charles Tipton and Kathy Ryan organized a session for the History of Physiology Interest Group titled "American Physiological Society: 125 Years of Progress." The session consisted of four presentations. The first by Kathy Ryan was titled "APS: Origins



APS members arriving on the North Embarcadero for the 125th Anniversary Beach Party.



APS moon floats over the North Embarcadero.



Martin Frank, Sue Barman, Kim Barrett and Joey Granger sing Happy Anniversary to the APS!



APS and Physiological Society of Japan leadership.



Nobel Laureate Oliver Smithies meets with attendees after his lecture.

and Founding;" Robert Carroll spoke about "APS and progress of physiology as a scientific discipline and profession;" and Martin Frank spoke about "APS and Advocacy: 1887 to the Present." The session culminated with a review of some of the significant papers published by the Society's membership over the past 125 years.

During the APS Business Meeting, TPS President Mike Spyer presented The Physiological Society "dog" to APS President Joey Granger. The Physiological Society's "dog," which serves as the TPS insignia, has a unique history. The bronze sculpture of a dog exhibiting the scratch reflex was presented to The Society by Sir Henry Dale at a Meeting at the Sherrington School of Physiology in October 1942.

During the Business Meeting Granger noted that a number of proclamations had been issued to mark the Society's 125th Anniversary. Congressman Chris Van Hollen (MD-8) published a proclamation in the Congressional Record. In addition, San Diego Mayor Jerry Sanders, and the San Diego County commissioners declared April 21, 2012 to be American Physiological Society Day in commemoration of the Society's 125th Anniversary.

One of the high points of the meeting was the presentation of the Society's first Nobel Prize in Physiology or Medicine lecture presented by Oliver Smithies. He spoke to a packed room about his research career and his experiences in the laboratory. It was a wonderful tutorial on discovery that was embraced by the many graduate stu-

dents and postdoctoral fellows in attendance. After his lecture, Smithies met with many of those in attendance to have his picture taken with them and to sign autographs.

The 125th Anniversary meeting also provided the Society with an opportunity to start a new meeting tradition. The APS added a closing reception to the well-received opening reception as a way to say thank you to all who persevered and stayed until the meeting's end. On Wednesday night, the Closing Party featured a mariachi band to complement the Mexican fare and ended with a performance by GI Distress, a band comprised of GI physiologists, and the FASEBettes, a singing group comprised of GI scientists, most of whom were APS members. Attendees at the Closing Party danced into the night to the rocking beat of GI Distress.

The Society gratefully acknowledges the support of the APS membership and staff that helped to make the APS 125th Anniversary Celebration a success. The APS also acknowledges the financial support provided by its members and the following companies and foundations: Abbott; ADInstruments; Cenveo Communications; Data Sciences International; GlaxoSmithKline; Kent Scientific Corporation; Lilly; Nike, Inc.; NovoNordisk Foundation; Pepsico-GSSI Long Term Research; Sucampo AG; S & R Foundation; Takeda Pharmaceuticals North America, Inc; and TMA Resources. ♦

Table 1 – 125th Anniversary Guest Societies.

American Federation for Medical Research (AFMR)
Association of Latin American Physiological Societies (ALACF)
Association of Physiologists and Pharmacologists of India (APPI)
Austrian Physiological Society (APS)
Biomedical Engineering Society (BMES)
Brazilian Society of Physiology (SBFis)
Hungarian Physiological Society (MET)
Kazakh Physiological Society (KPS)
The Microcirculatory Society (MCS)
Physiological Society of India (PSI)
The Physiological Society, UK (TPS)
Sociedad Mexicana de Ciencias Fisiologicas (SMCF)
Société de Physiologie, France (SP)
Society for Experimental Biology and Medicine (SEBM)
Turkish Society of Physiological Science (TFBD)

125th Anniversary Timeline of Physiology.



Mariachi band entertaining guests at the Closing Party.

GI Distress and the FASEBettes entertain at the Closing Party.



APS and TPS Announce the Joint Publication of *Physiological Reports*

In response to the increasing use of open access journals for the dissemination of scientific knowledge, the American Physiological Society (APS) and The Physiological Society (TPS) have signed an agreement to jointly publish an open access journal to be called *Physiological Reports*. *Physiological Reports* will publish peer reviewed research across all areas of basic, translational and clinical physiology and allied disciplines. As a collaboration between TPS and APS, *Physiological Reports* is in a unique position to serve the international physiology community through quick time to publication while upholding a quality standard of sound research that constitutes a useful contribution

to the field. Manuscripts will be accepted solely on the basis of scientific rigor, adherence to technical and ethical standards, and evidence that the data support the conclusions.

Physiological Reports aims to give authors a first decision quickly. Where revisions are required, *Physiological Reports* will focus on essential enhancements to improve clarity and remove ambiguity, avoiding requests for significant re-work. All feedback to authors will be given in a constructive, collegial manner.

Physiological Reports will consider suitable manuscripts submitted from three sources:

- Direct submissions to *Physiological Reports*

- Transferred from American Physiological Society journals along with the decision letter and reviews, following the agreement of the corresponding author

- Transferred from The Physiological Society journals along with the decision letter and reviews, following agreement of the corresponding author

The APS and TPS are in the process of recruiting an Editor-in-Chief for *Physiological Reports*. The goal is to issue a call for papers in October with a journal launch in January 2013. The APS and TPS encourage their members to support the joint venture. ❖

Thomson Reuters/ISI Releases 2011 APS Journal Impact Factors

Thomson Reuters/ISI has released its 2011 Science Edition of the Journal Citation Reports, which gives journal Impact Factors and rankings of approximately 8,000 science journals. The 2011 Impact Factors of the journals of the APS, along with a comparison of the

past 3 years, are given in the table below. The table also shows the rank of APS journals in the physiology category, as well as each journal's cited half-life.

The 2011 Journal Citation Reports includes an update to the Five-Year Impact Factor and Eigenfactor™

Metrics in JCR Web. Eigenfactor™ Metrics use citing journal data from the entire JCR file. The Eigenfactor™ score and the Article Influence™ score are calculated based on the citations received over a five-year period. ❖

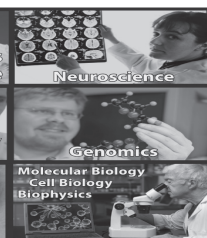
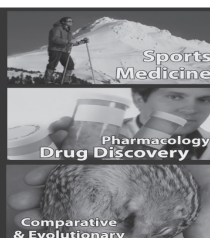
Journal	ISI Impact Factor Data					Eigenfactor™ Metrics			
	2008	2009	2010	2011	5-Year Impact Factor	2010 Cited Half-Life	2010 Rank Among Phys. Journals	2010 Eigenfactor™ Score	2010 Article Influence™ Score
<i>Physiological Reviews</i>	35.885	37.726	28.417	26.866	36.169	9.2	1	0.04732	14.975
<i>Physiology</i>	7.159	6.945	7.657	7.953	8.689	4.7	3	0.01176	3.555
<i>AJP-Endo</i>	3.855	4.395	4.686	4.746	4.577	7.0	7	0.04827	1.593
<i>Journal of Applied Phys.</i>	3.658	3.732	4.232	3.753	4.103	>10.0	15	0.05464	1.273
<i>AJP-Heart</i>	3.643	3.712	3.880	3.708	3.878	7.7	16	0.06865	1.236
<i>AJP-Renal</i>	3.890	3.731	3.792	3.682	3.796	6.7	17	0.03923	1.204
<i>AJP-Lung</i>	3.924	4.043	4.137	3.662	4.290	6.9	18	0.03197	1.384
<i>AJP-Cell</i>	4.230	4.013	3.817	3.536	3.970	7.2	19	0.04242	1.371
<i>AJP-GI</i>	3.587	3.258	3.522	3.431	3.647	7.0	20	0.03260	1.194
<i>AJP-Regu</i>	3.272	3.058	3.284	3.336	3.333	8.0	21	0.04364	1.084
<i>Journal of Neurophysiology</i>	3.648	3.483	3.114	3.316	3.713	9.9	22	0.09089	1.564
<i>Physiological Genomics</i>	3.436	3.931	3.368	2.735	3.260	5.6	28	0.01377	1.125
<i>Advances</i>	1.483	1.542	1.382	1.547	1.825	5.3	60	0.00157	0.416

WE ARE ALL PHYSIOLOGISTS



OUR RESEARCH INCLUDES:

- Biochemistry
- Biomathematics
- Biophysics
- Cell Biology
- Comparative & Evolutionary
- Genomics
- Medical & Veterinary Sciences
- Molecular Biology
- Neuroscience
- Pharmacology



APS Members are individuals worldwide whose work focuses on a wide variety of disciplines devoted to human and animal health and function—including systems biology, genomics, translational research and all other life sciences.

The majority of this international membership hold doctoral degrees in physiology, medicine, or other health professions; and they are employed in universities, hospitals, industrial organizations, medical schools, private foundations, and government. APS also has Student and Affiliate members.



Join The American Physiological Society

Apply Online at: www.the-aps.org

Physiological Reviews Holds European Editorial Board Meeting in Stockholm, Sweden

The APS journal, *Physiological Reviews* (PRV), held its European Editorial Board meeting in Stockholm, Sweden on June 8, 2011. The PRV European Editorial Board meets annually to present and discuss article topics and authors. Following an intensive all-day meeting, a list of the best articles is chosen along with authors who are invited to write them. The meeting was “hosted” by Barbara Cannon, Stockholm Univ, who has been appoint-

ed as European Chair of PRV as of January 2012 replacing Ole Petersen (Wales). Barbara Cannon is the incoming President of the Royal Swedish Academy of Sciences, and the PRV Editorial Board was treated to a tour of the Academy’s distinguished meeting room at Stockholm Univ., which is adorned with portraits of highly distinguished Swedish scientists and Nobel Laureates. ❖



Dennis Brown, Editor-in-Chief and Barbara Cannon, European Chair at the journal *Physiological Reviews* Editorial Board meeting in Stockholm.



***Physiological Reviews* European Editorial Board on the grounds of Stockholm Univ. Pictured are: Dennis Brown (Editor in Chief, USA); Andrea Brown (Editorial Assistant, USA); Joel Nargeot (France); Josephine Adams (United Kingdom); Kim Barrett (USA); Tullio Pozzan (Italy); Barbara Cannon, European Chair (Sweden); Helle Praetorius (Denmark); Maria Hopman (The Netherlands); Pierangelo Gepetti (Italy). Not pictured: Nava Bashan (Israel); David Eisner (United Kingdom); Lora Heisler (United Kingdom); Vladimir Skulachev (Russia).**

Undergraduate Research Excellence Fellowship Award

Deadline for Applications: February 2, 2013

Award Includes:

- \$4,000 for 10-weeks summer lab work
- \$1,300 reimbursement for travel to Experimental Biology meeting
- \$300 for research host



Undergraduate Research Excellence Fellowships (UREFs) provide a summer research experience for undergraduate students (2nd–4th years) with previous extensive research experience to work in the lab of an APS established investigator for 10 weeks and to attend the Experimental Biology (EB) meeting.

NOTE:

Both students and research host must be APS members. U.S. residency is NOT required.

For more information, see www.the-aps.org/uref.

Apply now at www.the-aps.org/awardapps.

Excellence in Professional Student (MD or DO) Research Travel Award

Deadline for EB Abstracts: November 8, 2012

Deadline for Applications: November 15, 2012

Award Includes:

- \$1,800 in reimbursement for travel and advanced meeting registration



The Excellence in Professional Student Research Travel Award provides funds for up to 10 MD or DO students who are 1st authors on an abstract submitted to the Experimental Biology (EB) meeting. The Award allows the students to attend, present their research, and participate fully in the EB meeting.

NOTE:

Students must be working with an APS member. U.S. residency is NOT required.

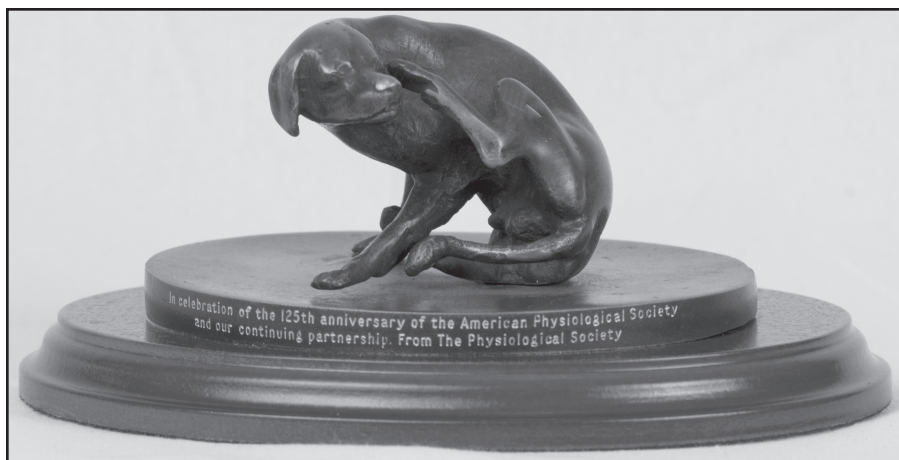
For more information, see www.the-aps.org/md for a pdf of all eligibility requirements and application details.

Apply now at www.the-aps.org/awardapps.

The Physiological Society Recognizes the APS 125th Anniversary

Over the past several years, the relationship between the APS and The Physiological Society (TPS) has grown as we have collaborated on a number of activities. Our strong relationship was reflected in the fact that the TPS was a guest society at the 125th Anniversary meeting and the APS and TPS leadership met to discuss collaborative opportunities in the areas of meetings, international outreach, education and science policy. In recognition of our close working relationship, TPS President K. Michael Spyer, Univ. College, London presented the Society with a bronze sculpture of a dog engraved as follows: "In celebration of the 125th anniversary of the American Physiological Society and our continuing partnership. From The Physiological Society." Replicas of the Society Dog are given to retiring Officers and distinguished Members of The Physiological Society and in this case, the APS.

The Physiological Society's "dog" which serves as the TPS insignia, has a unique history. The bronze sculpture of a dog exhibiting the scratch reflex was presented to The Society by Sir Henry



The Society Dog presented to the APS.

Dale at a Meeting at the Sherrington School of Physiology in October 1942.

The dog, created by an unknown renaissance sculptor, was originally given to the German physiologist Rudolph Magnus (1873–1927) by his father. Magnus subsequently gave the dog to Sir Charles Sherrington (1857–1952) who kept it for many years on the mantelpiece of his room in Oxford.

When he left Oxford, he passed the dog on to Sir Henry Dale (1875–1968). On leaving his laboratory at the National Institute for Medical

Research, Dale, in turn, presented the dog to The Physiological Society, mounted on a plinth, with the inscription "Rudolph Magnus gave me to Charles Sherrington, who gave me to Henry Dale, who gave me to The Physiological Society in October 1942."

The dog then became part of The Society's persona. He attended Meetings (including Dinners) and, until split sessions were introduced, sat in on Communications in the lecture theatre. In 1988 he was given a German dog license when he went to a Joint Meeting with the Deutsche Physiologische Gesellschaft in Wurtzburg.

In the 1980s the Dolmetsch family, famous for making wooden recorders, gave a handsome new plinth. Since this was quite heavy, an unmounted copy, known by one Meetings Secretary as Deputy Dog, sometimes went to overseas Meetings.

Sadly, at a Scientific Meeting in Bristol in 1994, the dog was stolen along with the car of one of the Society's employees. Many efforts have been made to recover him, including a reward of £1,000, but to date no trace has been found. The Foundry currently responsible for making these replicas gives added interest: among its products are the lions on the Nelson Monument in Trafalgar Square. ❖



TPS President K. Michael Spyer presents the Society Dog to APS President Joey Granger.

Pan-American Congress of Physiological Sciences

The international planning committee for the 1st Pan-American Congress of Physiological Sciences met in San Diego during the Experimental Biology 2012 meeting. Representatives from the United States, Argentina, Brazil, Canada, Chile, and the Asociacion Latino America De Ciencias Fisiologicas (ALACF) participated in the meeting. Representatives from Cuba and Mexico were unable to attend. The Brazilian Society of Physiology (SBFis) agreed to take financial responsibility for the meeting, contracting for the convention center and coordinating with the meeting management committee. The participating societies from the three

Americas would submit proposals for symposia, plenary and keynote lecturers and would strive to assist with their participation in the Congress. The call for proposals has been issued with a deadline of November 30, 2012. The Call for Proposals can be found at <http://www.the-aps.org/mm/hp/Featured-News/1st-PanAmerican-Congress-of-Physiological-Sciences-2014.pdf>.

The First Pan-American Congress of Physiological Sciences (PanAm-2014) is an historical meeting of the physiologists from the three Americas and represents the first time this has ever occurred. The Congress will be held in the city of Foz do Iguaçu, Brazil

[Iguassu Falls-Rafain Hotel & Convention Center (http://www.rafainpalace.com.br/v2/home_ing/)]. The Societies of Physiology of Argentina, Brazil, Canada, Chile, Cuba, Mexico, United States of America and the Latin-American Association of Physiological Sciences are in charge of the organization of this Pan-American Congress. The Congress will start on the evening of August 2 (Saturday) and the closing session will be at noon August 6 (Wednesday), 2014. The theme for this 1st Pan-American Congress is "Physiology without borders".

Please join us for an exciting meeting. ❖



The international planning committee for the 1st Pan-American Congress of Physiological Sciences. Front row: Joey Granger, Benedito Machado, Susan Barman, Martin Frank; Back Row: Dalton Vassalo, Victoria Velarde, Patricia Molina, Douglas Jones, Kim Barrett, Peter Wagner, Alejandro Aiello, Jane Reckelhoff, Rodrigo Iturriaga, Vagner Antunes, Thiago Moreira.



Attendees at Digestive Disease Week 2012 in San Diego "Meet the Editor;" Kay Lund, Editor in Chief of *AJP GI & Liver*.

Time: 6:00 PM
Tuesday, April 24, 2012
Place: San Diego, CA

I. Call to Order

The meeting was called to order at 6:00 PM by President Joey P. Granger who welcomed the members to the 165th Business Meeting of the American Physiological Society.

II. Election of Officers

President Granger announced the results of the election. The new President-elect is Kim E. Barrett, Univ. of California, San Diego (April 25, 2012–April 10, 2015). The three newly elected Councillors are Pamela K. Carmines, Univ. of Nebraska College of Medicine; Marilyn P. Merker, Medical College of Wisconsin; and William T. Talman, Univ. of Iowa Hospitals and Clinics (April 25, 2012–April 10, 2015). The newly elected Councillors will serve a three-year term. All newly elected officers will assume office at the close of EB2012.

III. Membership

A. Summary of the Membership Status

President-Elect Susan Barman reported on the status of the Society membership. As of March 25, 2012, the current membership of the Society is 11,289, of which 8,342 are regular members, 26 are honorary members, 1,052 are emeritus members, 67 are affiliate members, and 1,673 are graduate student members, and 129 are undergraduate student members.

B. Deaths Reported Since the Last Meeting

A list of the names of those members whose deaths had been reported since the last meeting was displayed. Barman asked the membership to stand and to observe a moment of silence in tribute to their deceased colleagues.

IV. Proposed Bylaws

Three bylaw changes were presented to the membership for approval.

The first bylaw change affects ARTICLE III. *Membership*. This change is to streamline the APS membership process by removing the requirement for sponsorship. **The motion was unanimously passed by the membership approving the amendment**

to the Bylaw as follows:

SECTION 6.a. *Graduate Student Members*. Any doctoral or masters program student who is actively engaged in physiological work ~~as attested to by two regular members of the Society~~ shall be eligible for proposal for graduate student membership. No individual may remain in this category for more than five years, without reapplying.

SECTION 8. *Nominations Evaluation for Membership*. ~~Two regular members of the Society must nominate a person for regular or affiliate membership on APS membership application forms.~~

~~a. The Membership Committee shall assess the qualifications of potential regular members and recommend nominations to Council.~~

~~b.a. Nominations Applications for affiliate and student regular, affiliate and student membership shall be reviewed by the Executive Director. If the nominees applicants meet the criteria established by Council, they will be accepted immediately and so notified. The Executive Director will inform Council of the names of new affiliate and student members.~~

~~SECTION 9. Election of Members. Election of regular and honorary members shall be by vote of members of Council. A two-thirds majority of the members present and voting shall be necessary for election.~~

~~SECTION 10.9. Voting. Only regular members shall be voting members. Honorary, affiliate, and emeritus members shall have the privilege of attending Business Meetings of the Society but shall have no vote.~~

~~SECTION 11.10. Expulsion of Members. The Society reserves the right to revoke the membership of a member found guilty of scientific misconduct.~~

The second bylaw change affects ARTICLE IV. *Officers*. This change allows members to nominate more than one APS member for Councillor and/or President-elect. **The motion was unanimously passed by the membership approving the amendment to the Bylaw as follows:**

Article IV. Officers. Section 4.
a. *Nomination of Officers*. Nominations for President-Elect and for members of Council will be made by ballot, on forms provided by the Executive Director, before September 30 of each Year. ~~Each member may~~

~~nominate no more than one candidate for each office.~~ If a member wishes to nominate the same person for President-Elect and for Councillor he/she must nominate that individual for each position.

The third bylaw change affects ARTICLE VII. Financial. This change more clearly defines the purpose of the Operating Fund and Short-Term Fund. **The motion was unanimously passed by the membership approving the amendment to the Bylaw as follows:**

SECTION 1. *Operating Fund Purpose*. The Operating Fund is used to provide sufficient cash to meet daily and ongoing financial obligations of APS. The Operating Fund will contain sufficient cash to cover current expenditures. Investments in the Operating Fund are limited to cash and fixed income instruments.

SECTION 2. *Short-Term Fund Purpose*. The Short-Term Fund is used to meet unanticipated expenditures that exceed the Operating Fund's reserves. Investments in the the Short-Term Fund is to contain approximately 50% of the value of the Operating Fund are limited to cash and fixed income instruments.

V. State of the Society

President Granger addressed the membership and spoke on the state of the Society.

Finances

Granger reviewed the APS budget stating that revenue for 2011 was \$18.6 million and expenses were \$17.9 million. The total revenue expected for 2012 is \$18.6 million. The value of all funds is \$46 million, and the value of the reserves fund, which is used to support the APS annual operating budget, is \$35 million. The other endowed funds total \$11 million and are used to support various APS awards.

Membership

Granger reported that the current membership of the Society 11,289, of which 26% is female and 30% are international members. He said that the Porter Physiology Development Committee launched a new initiative at EB—BE COUNTED—to help APS identify and further increase the membership of underrepresented minority physiologists in the specialty sections and regional chapters of the

Society, and to also increase participation of minority physiologists in the governance of the Society. BE COUNTED stickers were passed out at the meeting to APS members reminding them to complete their online member profile, including information on gender, racial and ethnic group, and interest areas.

Publications

Granger reported that APS publishes 14 journals. There were 8,000 manuscripts submitted to the journals, and 3,500 papers were published. The current time from acceptance to publication is 2.1 months. The Impact Factor for the journals is stable, and *PRV* has an impact factor of 28. In 2011, *Physiological Genomics* began publishing online only, and in 2012 the *AJP* Section Journals began publishing online only. He said that APS has signed a contract with Springer to publish APS books. A call for a new editor will be issued for *AJP-Regu*, *AJP-Renal*, and *Comprehensive Physiology*. Lastly, Granger reported that in 2013 APS and The Physiological Society would begin jointly publishing an Open Access Journal.

Science Policy

Granger said that APS continues to work closely with FASEB, the Ad Hoc Group for Medical Research Funding, Research!America, and other funding advocates. APS also works closely with Americans for Medical Progress, National Association for Biomedical Research on issues of animal advocacy. Other issues that the Science Policy Committee and department are working on include Publications access, Peer review, and strengthen relationships with funding agencies such as NIH and NSF.

International Outreach

Granger said that APS has several international outreach programs in place. One is the International Early Career Travel Awards through which APS brought 35 individuals to the EB12 meeting. The Latin American Initiative Awards program supports up to four workshops in Latin America annually. APS is also involved in an annual leadership exchange program with the leadership of The Physiological Society (UK) and also participates in annual meetings of sister physiological societies.

International Meeting Participation

APS will be participating in several upcoming international meetings. These include the AAPS Meeting, Ismailia, Egypt (September 1-2, 2012); the Brazilian Society of Physiology, Gramado, Brazil (September 2-5, 2012); the FEPS Meeting - Joint APS/SPS Symposium, Santiago de Compostelo, Spain (September 8-12, 2012); the China International Physiology Meeting, Suzhou, PR China (November 1-4, 2012); the IUPS 2013 Congress (hosted by The Physiological Society, Birmingham, UK, July 21-26, 2013); and the 1st PanAmerican Congress of Physiological Sciences 2014 in Fóz do Iguaçu, Brazil.

Future APS Meetings

There will be two APS Conferences in 2012: 1) *Autonomic Regulation of Cardiovascular Function in Health and Disease*, July 7-10, 2012, Omaha, NE; and 2) *APS Intersociety Meeting: Integrative Biology of Exercise*, October 10-13, 2012, Westminster, CO. The Experimental Biology 2013 meeting will be April 20-24, in Boston, MA.

Education Programs/Mentoring Programs

Undergraduate Research

Granger said that through the NIDDK STEP-UP grant, APS was able to double the number of annual fellowships awarded. Also, more than 25 undergraduate David Bruce research awards were made, and more than 110 undergraduate research posters were presented at EB12. The Education Department has expanded its partners, tools and resources used in the Archive of Teaching Resources which supports teaching communities. The Professional Skills Training Courses developed by the Education Committee and Department are now offered both as live courses and online.

PhUn Week

Granger reported that 16 teachers from the Frontiers in Physiology program (representing 8 different states) participated in the 2011 PhUn Week program. In 2011, the PhUn Week program included 64 events and reached 11,000 K-12 students nationwide.

APS Strategic Plan

Granger said that the initial preparation for The 2012 Strategic Plan was

started under then APS President Peter Wagner. As a result of the Strategic Plan development meeting, several task forces were created to focus on five key areas of the new plan. The task forces met via conference calls and presented their recommendations to Council at the spring meeting. Granger said that Council has now approved the task force recommendations and they will be sent to the appropriate APS committees for implementation. The major goals of the new Strategic Plan are to increase efforts to ensure awareness of, and advocacy for, the discipline of Physiology; actively work to attract, meet the needs of, engage and retain membership subgroups; develop strategies to strengthen the Society's publications in a changing world; enhance opportunities for scientific interaction and exchange; and increase the visibility of physiology in life sciences and health sciences education.

APS 125th Anniversary

Granger said that the APS staff and members were very active in organizing events to celebrate the Society's 125th anniversary. Many guest societies also had representatives at EB12 to help APS celebrate. These include American Federation for Medical Research, Association of Latin American Physiological Societies, Association of Physiologists and Pharmacologists of India, Austrian Physiological Society, Biomedical Engineering Society, Brazilian Physiological Society, Hungarian Physiological Society, Kazakh Physiological Society, The Microcirculatory Society, Physiological Society of India, The Physiological Society, Sociedad Mexicana de Ciencias Fisiologicas, Societe de Physiologie (France), Society for Experimental Biology and Medicine, and Turkish Society of Physiological Science.

The Physiological Society Presentation to APS

The Physiological Society (TPS) President Michael Spyer made a presentation to APS to celebrate the Society's 125th anniversary. Spyer said that "TPS would like to mark the anniversary by presenting the APS with a copy of the emblem of the TPS." He then presented a sculpture of a dog exhibiting the scratch reflex to APS President Joey Granger. The original sculpture was given to the German physiologist

Rudolph Magnus by his father. Magnus subsequently gave the dog to Sir Charles Sherrington, who then gave it Sir Henry Dale. Dale presented the sculpture to The Physiological Society at a meeting at the Sherrington School of Physiology in 1942. The inscription on the sculpture reads "In celebration of the 125th anniversary of the American Physiological Society and our continuing partnership. From The Physiological Society."

Conclusion

Granger said that "it is quite obvious that physiology is alive and well as it celebrates its 125th birthday. As I mentioned at the opening ceremony, when Mitchell, Martin, and Bowditch sent a letter to physiologists proposing the formation of a physiological society in 1887 they probably would have never imagined that 125 years later the APS would have over 11,000 members, an annual budget of \$18 million, assets totaling \$50 million, and a wide array of educational, mentoring, public advocacy and meeting programs that are second to none. Our success at APS is due in large part to you the members of APS and more importantly to Marty Frank and his staff at APS."

VI. Awards and Presentations

A. Ray G. Daggs Award

Ray G. Daggs was the APS Executive Secretary-Treasurer from 1956 until his retirement in 1972. In tribute to his devotion to the Society, the Ray G. Daggs Award was established, and is given annually to a physiologist for dis-

tinguished service to the Society and to the science of physiology. The 2012 Daggs Awardee is Barbara A. Horwitz.

Horwitz became an APS member in 1969, and since then her efforts have had a significant impact on the Society and its membership. In 1993 she was elected to the APS Council and in 2002-2003 she served as APS President—only the second woman to be elected to that position.

She has made seminal contributions in the areas of nutritional and metabolic physiology. Her early work on regulation of brown adipose tissue function helped set the stage for the current surge in research in this unique tissue type and the possibility that it may be manipulated therapeutically to address obesity and metabolic diseases in humans. Horwitz's research has contributed significantly to our understanding of the molecular basis of brain regulation of energy balance in genetic and diet-induced animal models of obesity; the cellular and molecular mechanisms underlying adrenergic stimulation of energy expenditure; the role of mitochondrial uncoupling proteins in energy balance and oxidative stress; and the physiological basis of altered metabolism in aging.

Horwitz is an elected Fellow of the American Association for the Advancement of Science and the recipient of an NIH MERIT award from the NIDDK.

Horwitz has also been widely recognized as an educator and mentor. At the Univ. of California, Davis, she taught general/cellular physiology for 20 years and also developed and taught

a long-running undergraduate research course—"Experiments in Physiology: Design and Execution." Horwitz was an APS Summer Research Mentor for a high school biology teacher (1995) and a community college teacher (1998), and participated in the APS's mentoring program. In 1996 she was the APS Arthur C. Guyton Physiology Teacher of the Year, and in 2007, Horwitz was recognized with the Bodil Schmidt Nielsen Distinguished Mentor and Scientist Award.

Horwitz's impressive record of high quality publications in excellent journals is a testament to her productivity and impact on the field. She has served as Section Editor for *Handbook of Physiology-Adaptation to the Environment*, as an Associate Editor for *News in Physiological Sciences* and on the editorial board of the *Journal of Applied Physiology*.

B. Orr E. Reynolds Award

The Orr Reynolds Award was established in 1985 in honor of the second Executive Secretary-Treasurer. It 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 recipient receives \$500 and expenses to attend the spring meeting of the Society. The 2012 Reynolds Awardee is G. Edgar Folk, Univ. of Iowa, for his article entitled "The Harvard Fatigue Laboratory: Contributions to World War II."



APS President Joey Granger presents the Ray G. Daggs Award to Barbara Horwitz.



APS President Joey Granger presents the Orr E. Reynolds Award to G. Edgar Folk, with President-elect Susan Barman.



APS President Joey Granger, President-elect Susan Barman and selection Committee Chair Seung Hong, present the Guyton Teacher of the Year to Richard Klabunde, Ohio University.

Folk thanked the Society for the award saying, "I have enjoyed the company of people like you for many years now. It's always a highpoint coming here every year. Thank you all for being here."

C. Arthur C. Guyton Teacher of the Year Award

The Arthur C. Guyton Physiology Teacher of the Year Award is selected by the Teaching Section and is presented to an APS member who is a faculty member at an accredited college or university. The Selection Committee selects a candidate for the Award who demonstrates evidence of: first, excellence in classroom teaching over a number of years at undergraduate, graduate, or professional levels; second, commitment to the improvement of physiology teaching within the candidate's own institution; and third, contributions to physiology education at the local community, national or international levels. This year's selection committee was chaired by Seung M. Hong, Univ. of Delaware, who presented the Award to Richard E. Klabunde, Ohio Univ., College of Medicine (OU-COM).

Klabunde is a cardiovascular physiologist with over 30 years of research experience supported by private and national grants. His love of this subject has been the source of inspiration to his students throughout his career regardless of the platform that ranges from the traditional classroom to the online courses to his own "free" websites for students to the training sessions for corporate executives and engineers in the industry. His ultimate goal as a medical educator is to equip students as "thinking physicians."

Klabunde's passion and dedication for teaching was evident even during his graduate studies at the Univ. of Arizona, where he received the Teaching Award as the best Teaching Assistant in Basic Science departments of the College of Medicine. His contribution to physiology education is quite expansive as it includes innovative technology coupled with engaging teaching methods such as debates and case-based instruction. His innovative instructional tools include the limb circulation teaching model, advanced physiology animal labs, cardiovascular physiology or pharmacology website, online teaching module, cardiovascular computer simulation lab, audience response system for lectures, and

online cardiovascular pharmacology graduate course. His free websites for cardiovascular physiology and pharmacology receive 2.5 million hits and 180,000 unique visitors per month. This success in physiology website was shortly noted by a major publisher, leading him to write a textbook, "Cardiovascular Physiology Concepts."

These innovative and dedicated instructive approaches have created a tangible zeal on the part of students for learning about physiology, evidenced by receiving the Outstanding Basic Science Faculty Award every year since his arrival at OU-COM in 1998. Many students commented about his extraordinary ability to simplify complex physiology concepts in a relevant context. His ongoing commitment to education was also noted by the administration, granting him the OU-COM Standard of Excellence of Award in 2004.

Klabunde's leadership in curriculum development was also remarkable during his tenure at OU-HCOM. He played a significant role in the development of the new Clinical Presentation Consortium Curriculum as a member of the Cardiovascular Block Team and later as Course Coordinator of the Winter Medical Knowledge Course. While serving as the Director of this curriculum, he guided the curriculum along a new path that encouraged increased student responsibility for learning and innovation in content delivery. His leadership also infused a new energy to the program, fostering an attitude of integration among the basic science and clinical faculty and inspiring successive classes of students.

Klabunde's professional contributions to the APS include serving as a past president of an APS Chapter—Ohio Physiological Society—and as a member of the APS Chapter Advisory Committee. He has presented and published numerous times on his innovative teaching methods and medical physiology curricular development. As an active member of the International Association of Medical Science Educators, he has given talks on enhancing medical student learning at their annual meetings as well as serving as a question writer for the National Board of Osteopathic Medical Examiners.

Arthur C. Guyton had a major impact on Klabunde; a Guyton's *Medical Physiology Textbook* that he used in 1968 in undergraduate physiology inspired him to pursue a PhD in

physiology. It was also Guyton's example as a superb teacher and communicator that inspired Klabunde early in his career to someday write a physiology textbook that reflected his love for cardiovascular physiology.

D. Dale Benos Early Career Professional Service Award

This award was established to recognize Dale Benos, the Society's 79th President, Chair of Physiology at the Univ. of Alabama, Birmingham and a distinguished physiologist who was known and loved by many in the Society, and died suddenly last year. The award recognizes Dale's dedication and commitment to excellence in the training and mentoring of young physiologists, as well as colleagues.

The Early Career Professional Service Award honors a member of the Society at an early stage in their career (graduate student, postdoctoral fellow, Assistant Professor or equivalent position) who is judged to have made outstanding contributions to the physiology community and demonstrated dedication and commitment to furthering the broader goals of the physiology community. This can be by serving on professional committees, participating in K-12 education outreach, participating in scientific advocacy and outreach programs, or by otherwise strengthening and promoting the physiology community.

Jennifer Sasser, Chair of the APS Trainee Advisory Committee joined Granger in the award presentation. The recipient of the 2012 Dale Benos



APS President Joey Granger, Jennifer Sasser, Chair, Trainee Advisory Committee, and President-elect Susan Barman present the Dale J. Benos Guyton Early Career Professional Service Award to Jennifer K. Uno.



APS President Joey Granger, President-elect Susan Barman, Ryuji Ueno, and Sachiko Kuno present Christopher Weber with the S&R Foundation Award.



APS President Joey Granger and President-elect Susan Barman present Anthony Gerber and Tracy Baker-Herman with the Giles F. Filley Memorial Award.



APS President Joey Granger, President-elect Susan Barman, and Muriel Mandel present the Lazaro J. Mandel Young Investigator Award to Marcelo Carattino.

Early Career Professional Service Award is Jennifer K. Uno, Elon Univ.

E. S&R Foundation Ryuji Ueno Award for Ion Channels or Barrier Function Research

The S&R Foundation Ryuji Ueno Award for Ion Channels or Barrier Function Research was established in 2007 by the American Physiological Society through the generous support of Ryuji Ueno, Sachiko Kuno, and S&R Foundation. Ueno and Kuno are founders of Sucampo Pharmaceuticals, Inc., and S&R Foundation, both in Bethesda, MD. The Ryuji Ueno Award is given annually to an individual demonstrating outstanding promise based on his/her research in ion channels or epithelial barrier function and who holds an academic rank of assistant professor or higher. The award of

\$30,000 is designated for use in the ion channels or epithelial barrier function research program in which the awardee is conducting his/her research. APS is pleased to recognize this year's awardee Christopher Weber, Univ. of Chicago.

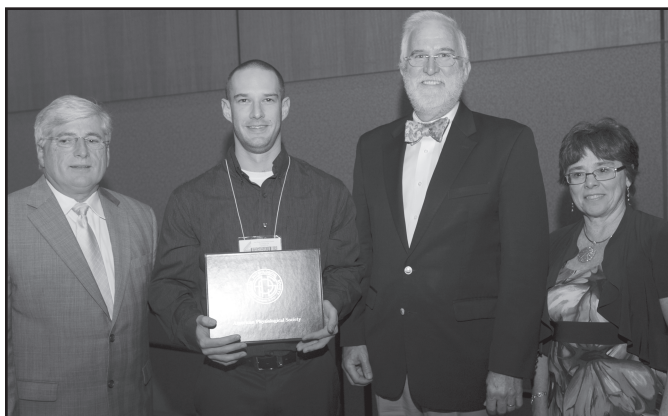
F. Giles F. Filley Memorial Awards

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 \$12,000 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 pro-

gram. APS is pleased to recognize this year's awardees Tracy Baker-Herman, Univ. of Wisconsin and Anthony Gerber, National Jewish Health and Univ. of Colorado.

G. 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 award is made to an APS member working in the United States who has demonstrated outstanding promise based on his or her research program. The awardee is an investigator who holds an academic rank no higher than assistant professor and is pursuing research in epithelial or renal physiology. The award is \$4,000 and is designated for the use of the awardee in his/her research program. Muriel



APS President Joey Granger, President-elect Susan Barman, and Dusty Sarazan, VP, DSI present the Dean Franklin Young Award to Richard Wainford.



APS President Joey Granger and President-elect Susan Barman present the Shih-Chun Wang Young Investigator Award to Qi Fu.



APS President Joey Granger and President-elect Susan Barman present the Arthur C. Guyton Young Investigator Award to Felim Mac Gahbann.



APS President Joey Granger, President-elect Susan Barman, Physiologists in Industry Committee representative Rebecca Persinger and Biopharma President Craig Plato present the Physiologists in Industry Committee Awards to Randy F. Crossland and Emrush Rexhaj.

Mandel, wife of Lazaro Mandel, joined Granger in the award presentation. This year's awardee is Marcelo Carattino, Univ. of Pittsburgh.

H. Shih-Chun Wang Young Investigator Award

As a result of a bequest from the wife of Shih-Chun Wang, a memorial fund was established in 1998 to recognize excellence in physiology. An annual award is made to an investigator who holds an academic rank no higher than assistant professor and is pursuing research in physiology. The award is made to an APS member working in the United States who has demonstrated outstanding promise based on his or her research program. The award is for \$4,000 and is designated for the use of the awardee in his or her research program. APS is pleased to recognize this year's awardee Qi Fu, Univ. of Texas Southwestern Medical Center.

I. Dean Franklin Young Investigator

The Dean Franklin Young Investigator Award was established by Data Sciences International (DSI) in recognition of Franklin's role in the development of instrumentation to monitor physiological function in conscious research animals and humans. Concepts originally formulated by Dean Franklin continue to serve as the inspiration behind many of DSI's most technologically advanced physiological monitoring systems developed for today's nonclinical research. The award recognizes a post-doctoral scientist or junior faculty member who is pursuing

in vivo physiological research and is in the process of establishing an independent laboratory. The award recipient receives a travel award of \$1,500 to attend the annual Experimental Biology meeting to present his/her work, and a DSI instrumentation starter kit valued at approximately \$20,000. Dusty Sarazan, VP, DSI, joined Granger on stage to recognize this year's awardee, Richard Wainford, Boston Univ. School of Medicine.

J. 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 assistant 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 \$15,000 and is designated for use by the awardee in his/her research program. This year the Society is pleased to present the award to Felim Mac Gahbann, Johns Hopkins Univ.

K. International Early Career Physiologist Travel Awards

The International Early Career Physiologist Travel Award program was established in 2008 for graduate students, postdoctoral fellows and jun-

ior faculty members who work outside the United States. The intent of this award is to assist with the travel expenses of international early career physiologists while they are attending the EB Meeting to present their work. In recognition of the Society's 125th Anniversary and its role in the training of the international community of physiologists, this year the International Physiology Committee selected 35 awardees.

L. Physiologists in Industry Committee Awards

The Physiologists in Industry Awards were established in 1999, and are given to a graduate student and to a postdoctoral fellow submitting the best abstract describing a novel disease model. This award is sponsored by the Physiologists in Industry Committee and by Plato Biopharma, Inc. The 2012 Physiologists in Industry Awards were presented by Physiologists in Industry Committee representative Rebecca Persinger and Plato Biopharma President and CEO Craig Plato. The recipients of this year's awards are Randy F. Crossland, Baylor College of Medicine, and Emrush Rexhaj, Bern Univ. Hospital.

M. Macknight Progressive Educator Award

The Macknight Progressive Educator Award, supported by ADInstruments, is named in honor of Anthony Macknight, APS member since 1978 and founder of ADInstruments. The Award honors an APS member who demonstrates the greatest potential for



APS President Joey Granger, President-elect Susan Barman, and ADI Instruments representatives present the Macknight Progressive Educator Award to Terrence Sweeny.



APS President Joey Granger, President-elect Susan Barman, and Steven Horvath present the Steven M. Horvath Professional Opportunity Awards to Vanesa Ramseyer and Kedra Wallace.

incorporating innovative teaching techniques and for effectively utilizing technology resources in engaging undergraduate students in physiology education. The awardee received a \$1,500 Travel Award to attend the Experimental Biology meeting and an Institutional Grant valued at approximately \$20,000 providing the award recipient's institution with a PowerLab LabTutor Physiology Teaching Bundle or equivalent.

This year the Society is pleased to recognize Terrence Sweeny, Univ. of Scranton, as the ADInstruments Macknight Progressive Educator Awardee.

N. Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards

The recipients of the Caroline tum Suden awards are selected by the

Women in Physiology Committee, chaired by Angela Grippo. This year's 36 awards were made possible by the bequests of Caroline tum Suden and Frances Hellebrandt, who were longtime members of the Society. Awards are open to graduate students or postdoctoral fellows presenting a first-author abstract at the EB meeting. Recipients receive a \$500 check and paid registration.

O. Steven M. Horvath Professional Opportunity Awards

In addition to the tum Suden awards, the Women in Physiology Committee selects the top two applications from minority candidates to be the Steven M. Horvath awardees. The identification of these individuals is a reflection of Steven Horvath's long-term commitment to the training of minority physiologists. These awards

are made possible by a bequest of the family of Steven M. Horvath, a longtime APS member. The son of Steven Horvath, Peter Horvath, joined Granger to recognize this year's awardees Vanesa Ramseyer, Henry Ford Hospital and Kedra Wallace, Univ. of Mississippi Medical Center.

P. Gabor Kaley Professional Opportunity Awards

The Gabor Kaley Professional Opportunity Award recipients are selected by the Women in Physiology Committee as part of the tum Suden/Hellebrandt Award selection process. The Committee selects two graduate students or postdoctoral fellows to be the Gabor Kaley Award winners.

Gabor Kaley was born in Budapest in 1926, earning his PhD in Experimental Physiology from New York Univ. in 1962. He joined the faculty at New York



APS President Joey Granger and President-elect Susan Barman present the Gabor Kaley Professional Opportunity Awards to Arun Roj and Rachel Drew.



APS President Joey Granger, President-elect Susan Barman, and Curt Strand, and Annabell Segarra present the Fleur Strand Professional Opportunity Award to Sara Turner.



APS President Joey Granger and President-elect Susan Barman present Marshall Montrose, outgoing Gastrointestinal and Liver Section Chair, and Mark Chapleau, outgoing Neural Control and Autonomic Regulation Section Chair, with a certificate of appreciation.



APS President Joey Granger presents Curt Sigmund, outgoing Councillor, with a certificate of appreciation.

Medical College in 1963, becoming Chairman of the Department of Physiology in 1970. When he retired in 2007, he had the distinction of being the longest sitting chairman of physiology in the nation. His research focused on the microcirculation and he contributed over 200 papers to those efforts. Gabe passed away in December 2011 and these awards are designed to recognize his contributions to physiology.

APS is pleased to recognize this year's awardees Rachel Drew, Penn State Univ. College of Medicine, and Arun Rooj, Univ. of Alabama, Birmingham.

Q. Fleur Strand Professional Opportunity Award

The Fleur L. Strand Professional Opportunity Award was established by her former students, with the major impetus provided by Annabell Segarra, Univ. of Puerto Rico. Upon her passing, friends and family made generous con-

tributions to the fund in order to endow the award in Fleur Strand's name. The Award recipient is selected by the Women in Physiology Committee as part of their tum Suden/Hellebrandt Award selection process. The recipient of the Strand Award is the highest ranked graduate student or postdoctoral fellow presenting a first-authored abstract at the Experimental Biology meeting. The Award recipient receives \$1,000 and paid registration.

The Award is named in honor of Fleur L. Strand, formerly a Professor at New York Univ. Strand was the first to show that stress-evoked hormones, such as adrenocorticotrophic hormone (ACTH), could have a direct effect on peripheral systems, such as muscle, independent of the adrenal gland. This effect was demonstrated in developing and regenerating neuromuscular systems. It was previously believed that ACTH could only act through the adrenal gland. APS is pleased to recognize this year's awardee Sara Turner, Univ. of Wisconsin, Madison.

APS Awards Program

Granger said that APS annually makes approximately 400 awards with a value of \$1.25 million. This is an outstanding program of the Society.

R. Recognition of Outgoing Section Chairs

Mark Chapleau, Chair of the Neural Control & Autonomic Regulation Section, and Marshall "Chip" Montrose, Chair of the Gastrointestinal & Liver Section completed their terms at the close of the EB12 meeting. Granger thanked them for their service to their sections and to APS.

S. Recognition of Outgoing Councillors

Councillors David Brooks, Usha Raj, and Curt Sigmund completed their terms at the close of the EB12 meeting. Granger thanked them for their service to the Society. Granger thanked them for all their hard work over the past three years.

T. Recognition of Past President Peter D. Wagner

Granger said "As many of you know Peter has been an active member of APS for many years serving on numerous committees including Chair of the Finance committee, APS President where he was instrumental in initiating our Strategic planning efforts, and as of last year Editor in Chief of *Journal of Applied Physiology*. On behalf of the Society, I would like to thank Peter for his enduring support and commitment to APS. I would also like to personally thank him for being an outstanding mentor to me during my tenure as APS President."

U. Conclusion

Granger said, "My tenure as President ends at the conclusion of this



APS President Joey Granger and President-elect Susan Barman present a plaque to Peter Wagner, APS Past President.



APS Section Advisory Committee: Front Row: Siribhinya Benyajati, Ann Schreihof, Heddwen Brooks, Scott Powers, Josh Anthony, Marshall “Chip” Montrose. Back Row: J. Michael Wyss, Eric Delpire, Mark Chapleau, Jennifer Pollack, Wolfgang Kuebler, Barbara Goodman, Robert Hester.

meeting. It has been an extreme honor and pleasure to serve you as members of this great society. It will always be a memorable year that I will cherish for the rest of my life.”

VII. Passing of the Gavel

Granger then passed the gavel to Susan Barman, Michigan State Univ. (MSU), incoming President of the American Physiological Society.

Granger said, “Sue Barman is currently Professor of Pharmacology at MSU. She is internationally known for her work on autonomic control of the circulation. Sue has been an enthusias-

tic and active member of the Society for many years, serving on numerous committees including as Chair of the Section Advisory committee where she played an instrumental role in transforming that body into an effective and proactive committee. It has been a pleasure for me to have served with her on the Executive committee during this past year and I look forward to serving with her in her capacity as President of the American Physiological Society.”

Barman, upon accepting the gavel, she said “This is a real pleasure. I’d like to thank Joey for his hard work and teaching me how to be the next presi-

dent.” She also pointed out that history is being made in APS as there will now be two women on executive cabinet—herself and President-elect Kim Barrett.

VIII. New Business

No new business.

There being no new business, the meeting was adjourned at 7:15 pm, April 24, 2012. ❖

*Susan Barman
President-Elect*



President Joey Granger presents L. Gabriel Navar with the Walter B. Cannon Memorial Award.



Past President Peter Wagner presents Mingyu Liang with the Henry Pickering Bowditch Award.



APS Council: Front Row: John Chatham, Peter Wagner, Ida Llewellyn-Smith, Susan Barman, Joey Granger, Ann Schreihofer, David Brooks, and Tom Pressley. Back Row: Marilyn Merker, J.R. Haywood, Ken Baldwin, Pam Carmines, Alan Sved, Kim Barrett, Jane Reckelhoff, Jeff Sands, Patricia Molina, and Ron Lynch.



APS Presidents: Sitting on ground: Martin Frank. Front Row: Walter Boron, Shu Chien, Joey Granger, Hannah Carey, Susan Barman, Barbara Horwitz, Kim Barrett, John Williams. Back Row: Irv Zucker, Brian Duling, L. Gabriel Navar, Peter Wagner, D. Neil Granger, Frank Knox, Gerald DiBona, James Schafer, Gary Sieck, William Dantzler, Harvey Sparks, John West, Allen Cowley.

Barrett Receives Schmidt-Nielsen Distinguished Mentor and Scientist Award at EB 2012

The APS Women in Physiology Committee hosted a reception at Experimental Biology 2012 to honor Kim Barrett, Univ. of California, San Diego, School of Medicine, who was selected as the ninth recipient of the Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award.

Over 80 colleagues, trainees, and EB awardees gathered to celebrate the award and hear Barrett's award lecture entitled, "How to Believe In Others and Other Musings on Mentoring." 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>). Declan McCole, Univ. of California, San Diego, who coordinated the nomination of Barrett for the award, was present to introduce her. The award was presented to Barrett by Angela Grippo, Chair of the Women in Physiology Committee, Joey Granger, President of the APS, and Martin Frank, APS Executive Director.

Barrett received her BSc in Medicinal Chemistry and her PhD in Biological Chemistry from Univ. College London, England. In 1982, she then ventured across "the pond" to work for 3 years as a Visiting Fellow at the National Institute of Allergy and Infectious Diseases, National Institutes of Health in Bethesda, MD. In 1985, she was recruited to the Department of Medicine at the Univ. of California, San Diego (UCSD) as a junior faculty member of the Division of Gastroenterology by the late Kiertisin Dharmasathaphorn, at that time an up and coming researcher in the area of epithelial transport physiology. In 1988 she was appointed Assistant Professor of Medicine and rose through the ranks at UCSD to become a full Professor of Medicine in 1996 and Vice-chair of Research for the Department of Medicine in 1999, a position she held for 7 years. She is currently Dean of Graduate Studies at UCSD and was recently re-appointed for a second term.

Among her many research contributions, Barrett has pioneered the area of growth factor regulation of epithelial ion transport, immensely increasing understanding of the multiple roles of growth factors and mitogenic signaling pathways in the acute regulation of intestinal epithelial function. She has also generated key insights into bacterial manipulation of epithelial function, roles for commensal bacteria in intestinal homeostasis, and mechanisms of action of probiotics in regulating epithelial function in models of inflammation. She has over 100 original scientific publications, over 100 review articles and book chapters, and 225 invited speaking engagements to her credit.

In addition to shaping our thinking on physiological systems through her research and review articles, Kim has also had a profound influence on the teaching of physiology. This includes publishing articles on the teaching of physiology. She has also written sever-



Joey Granger, Angela Grippo, and Martin Frank present the award to Kim Barrett (center right).



Angela Grippo, WIPC Chair, giving an overview of the Schmidt-Nielsen Award.



Declan McCole introducing awardee, Kim Barrett.



Barrett's award lecture.

al book chapters, served as lead author and overall editor for the 23rd Edition of Ganong's Review of Medical Physiology, in 2010, and wrote a textbook of her own entitled Gastrointestinal Physiology, published in 2006. She has also received a number of awards for teaching from UCSD.

As a mentor, Barrett has been an invaluable guide for the many postdoctoral scholars and students who have worked with her. Her support and mentoring of her trainees has paid great dividends as many of her mentees have gone on to establish their own independent research careers, generate their own independent funding and win national awards.

Barrett has been a selfless advocate for young researchers at both institutional level, as chair of the UCSD Biomedical Sciences PhD program and chair of the committee on research and faculty development at UCSD, and also at national level through her participation on many American Physiological Society and American Gastroenterological Association (AGA). She has also given her time and effort to conduct symposia and deliver seminars to thousands of trainees and junior faculty at national meetings on how to determine a career path and navigate the academic promotion system. She has also been a powerful advocate for many associations and groups, especially for women in science and women in physiology in particular. This has led to recognition in various forms including a YWCA

TWIN (Tribute to Women in Industry) Award, in 2009. She has worked tirelessly to promote scientific awareness, the need for enhanced NIH funding, and the importance of graduate education among members of the legislature, and to increase awareness in the media. Her outreach efforts have also encompassed an NSF-funded GK-12 program that places graduate students as partners with teachers in local high school classrooms.

Barrett has won numerous honors recognizing her research accomplishments, including the APS Henry Pickering Bowditch award, the APS Davenport Lecturer award, the AGA Young Investigator Award, an honorary Doctorate of Medical Science from Queen's Univ., Belfast, and election as a Foreign Member of the Swedish Royal Society of Sciences. In 2008 she received one of the awards of which she is proudest when she was selected as one of the AGA Outstanding Women in Science. Her scientific accomplishments were also recognized by her colleagues at UCSD School of Medicine when she received the Faculty Distinguished Lecturer Award in 1999. She has also served as a reviewer on numerous NIH study sections and on NIH advisory panels.

Barrett brings a great heart to all her endeavors through her passion for science, her dedication to the academic mission of her institution and the associations to which she has dedicated huge efforts, in particular the APS, and most

notably to the countless individuals she has touched with her compassion and willingness to help, be they humble undergraduates or senior professors.

In addition to being an incredible role model for women in science, Barrett has been a wonderful servant to the American Physiological Society. She has served on committees for both the Gastrointestinal and Cell sections, and chaired a number of committees including the Women in Physiology Committee, and the Committee on Committees. She has also devoted a significant portion of her career to editorial duties on behalf of APS. She served as Editor-in-Chief for the *American Journal of Physiology: Cell Physiology* for six years (1996-2002), and chaired the APS Publications Committee (2005-2010). She is currently vice-chair of the Publications Committee with a special responsibility for ethical issues. In addition, she is currently Deputy Editor-in-Chief and Senior Editor of the *Journal of Physiology* and has served on the editorial boards of a number of other prominent journals. Indeed, her service to APS will increase further as she has been selected to serve as APS President-Elect (2013).

APS members are encouraged to nominate members for the 2013 Bodil Schmidt-Nielsen Award. For more information, see the APS website (<http://www.the-aps.org/education/schmidtnielsen>). Application deadline is September 15, 2012. ❖

Uno Receives 5th Dale J. Benos Early Career Professional Service Award

The APS Trainee Advisory Committee is pleased to announce that Jennifer K. Uno, assistant professor in the Department of Biology at Elon Univ., has been selected as the fifth recipient of the APS Dale J. Benos Early Career Professional Service Award. The Committee was extremely impressed with Uno's remarkable level of service with students at the graduate/medical, undergraduate, and K-12 levels. This service can be seen in three areas: service/teaching, mentoring, and leadership, each of which is visible during her career as a graduate student, postdoctoral fellow and now as a faculty member.

Outreach/Teaching: As a graduate student, Uno designed and taught a human pathophysiology course for sen-

ior physiology undergraduates for two years.

As a SPIRE (Seeding Postdoctoral Innovators in Research and Education) Postdoctoral Fellow at the Univ. of North Carolina, Uno developed physiology courses for a Historically Minority Univ. (HMU). Her goal was to cultivate minority students' interest in physiology and allow them to realize their potential as future physiologist and scientists.

As a faculty member at Elon Univ., Uno teaches Human Physiology, as well as Human Anatomy and General Biology. In addition, she uses PhUn Week as a platform to work with her students to develop physiology-based interactive projects to both engage her undergraduate students in physiology

and to bring hands-on learning to children at the Boys & Girls Club in Burlington, NC. Similar activities are planned for the upcoming Brain Awareness Week and DNA Day. Uno has also been named a Service-learning Scholar at Elon Univ.. This program will support her to create a designated service-learning course in which her students will strengthen their knowledge of physiology by teaching and engaging K-12 students in physiology based activities in Elon and Burlington, NC.

Service: As a graduate student, Uno served as the graduate student representative on both the Physiological Sciences Program and Recruiting Committees and as the Physiological

Sciences Student Forum Coordinator.

As a postdoctoral fellow and faculty member, Uno has volunteered half a day during EB to act as a judge for the David S. Bruce Excellence in Undergraduate Research Awards for several years. She has also participated in the K-12 Teacher-Student day during EB, helping with the “Elvis Experiments” and the “Meet a Scientist” activities, which has enabled her to work with K-12 students.

As a postdoctoral fellow and new faculty member, Uno served as the trainee representative on the APS Science Policy Committee. She made multiple trips to Washington DC where she met with congressional policy makers to discuss the importance of NIH funding. This experience has made her both an advocate for science funding and also for science literacy. As a faculty member, she continues to pursue science advocacy and literacy and is currently working with a fellow faculty member on developing a Science and Society Minor at Elon Univ. She now serves as the GI Section representative to the APS Programming Committee.

Throughout her career, Uno has served her local community as a science fair judge, fundraising volunteer, and panelist at many different types of workshops and meetings.

Mentoring: As a graduate student, Uno began mentoring high school and undergraduate students. As a postdoctoral fellow, she added medical students as protégés. To date, she has mentored 16 students.

Now, as a faculty member, Uno serves as a mentor for the Preparing Future Faculty program sponsored through Duke Univ. This program is designed to teach graduate students about other areas in academia. To this end, Uno’s mentee has already committed to do

both Brain Awareness Week and DNA Day activities.

Because of her commitment to service, teaching, mentorship, and leadership, the Trainee Advisory Committee was pleased to award the 2012 Dale J. Benos Early Career Professional Service Award to Dr. Jennifer Uno. ❖



President Joey Granger presents Jennifer Uno with the APS Dale J. Benos Early Career Professional Service Award. Also pictured are Trainee Advisory Committee Chair Jennifer Sasser and President-elect Susan Barman.

Sweeney Receives Second ADInstruments Macknight Progressive Educator Award

Terrence E. Sweeney, PhD, from the Department of Biology at the Univ. of Scranton in Scranton, PA, received the second ADInstruments Macknight Progressive Educator Award. Sweeney was selected based on his proposal entitled “Design, Development and Implementation of a Mechanical Model of the Cardiovascular System for Pedagogical Use.”

This award honors an APS member who demonstrates the greatest potential for incorporating innovative teaching techniques and effectively utilizing technology resources in engaging undergraduate students in physiology education. It is sponsored by ADInstruments in honor of its co-founder, Tony Macknight.

The APS Education Committee chaired by Thomas Pressley (Texas Tech Univ.) selected Sweeney from the pool of applicants. He was chosen based on a two-three page description of a laboratory experiment or activity that exemplifies innovative use of technology in physiology education, an explanation of how this activity/technique can be integrated in the curricu-

lum to best benefit students, a CV, and a letter of recommendation from his Department Chair or administrator.

Sweeney received a \$1,500 Travel Award to attend Experimental Biology, a certificate of recognition, and an Institutional Grant providing the award recipient’s institution with a PowerLab PTB 4152 LabTutor

Physiology Teaching Bundle or its equivalent.

Sweeney presented a poster at EB on his work and will submit an article to *Advances in Physiology Education*.

APS congratulates Dr. Terrence Sweeney on receiving this award. ❖



President Joey P. Granger, Wes Colgan and Brian Zahn representing ADInstruments, awardee Terrence E. Sweeney, and President-elect Susan M. Barman.

Novel Disease Model Awards Granted to Graduate Student and Postdoctoral Fellow

Predoctoral students and postdoctoral fellows who were first authors on an abstract submitted to Experimental Biology 2012 in San Diego, CA were eligible to apply for the Novel Disease Model Awards.

The APS Physiologists in Industry Committee chaired by Kelly Pitts, from Corgenix Medical Corporation, selected a predoctoral and a postdoctoral awardee from the applicants. Awardees were chosen based on the novelty of the model and the potential utility of the system for future research related to a disease process.

The predoctoral awardee received \$500, a certificate of recognition, and complimentary advanced registration for the EB 2012 meeting. The postdoctoral awardee received \$800, a certificate of recognition, and complimentary advanced registration for the EB 2012 meeting. Beginning in 2011, the Novel Disease Model Awards were sponsored by Plato BioPharma, Inc.

The Predoctoral Awardee was Randy



Novel Disease Model awardees: President Joey Granger, Emrush Rexhaj (Postdoctoral Awardee), Randy Crossland (Predoctoral Awardee), President-elect Susan Barman, Craig F. Plato (President & CEO of Plato BioPharma, Inc.), and Rebecca Persinger (representative of Physiologists in Industry Committee).

F. Crossland, Baylor College of Medicine, for his abstract entitled "Cerebrovascular Consequences of Obstructive Sleep Apnea."

The Postdoctoral Awardee was Emrush Rexhaj, Inselspital in Switzerland, for his abstract entitled

"Epigenetically-induced vascular dysfunction and hypertension by in vitro fertilization; prevention by addition of melatonin to the culture media."

Awards were presented during the APS Business Meeting. APS congratulates these awardees. ❖

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

Undergraduate students who were first authors on an abstract submitted to Experimental Biology 2012 in San Diego, CA were eligible to apply for the David S. Bruce Awards. Last year, the Bruce Awards were split into two awards: the Outstanding Undergraduate Abstract Award and the Excellence in Undergraduate Research Awards.

The APS Education Committee, chaired by Thomas Pressley, Texas Tech Univ. Health Sciences Center, selected 26 Outstanding Undergraduate Abstract Awardees from a pool of 72 applicants. Awardees 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. The 26 Outstanding Abstract Awardees were: Alexander Allen, Winona State Univ., lab of John H. Eisenach; Larry Bachman Jr., Univ. of California, San Diego, lab of Alan R. Hargens; Paulo Basso, Univ. de Sao Paulo, lab of Maria Jose Alves da Rocha; Elaina Bost, Univ. of Florida,

lab of Leonardo F. Ferreira; Kathan Chintamaneni, Washington Univ. in St. Louis, lab of Hershel Raff; Vinh Dang, Michigan State Univ., lab of Bruce D. Uhal; Cheryl Dykstra-Aiello, Eastern Washington Univ., Lab of Karen A. Carlberg; Kari Echtenkamp, Univ. of Nebraska, Omaha, lab of Steven C. Sansom; Christopher Engler, Creighton Univ., lab of Irving H. Zucker; Aida Freire Valls, Pompeu Fabra Univ., lab of Ellen C. Breen; Jennifer Frielle, Gettysburg College, lab of Sean D. Stocker; Michael Gowen, Univ. of Pittsburgh, lab of Bill J. Yates; Troy Green, William Jewell College, lab of Michael J. Wacker; David Hallowell, Brigham Young Univ., lab of David M. Thomson; Giancarlo Ibanez, Univ. of California, Davis, lab of John M. Horowitz; Alex Johnson, Univ. of Minnesota, Duluth, lab of Jeffrey S. Gilbert; Woojin Joo, Chapman Univ., lab of Kenneth D. Sumida; Kaitlyn Kennard, Ursinus College, lab of Beth A. Bailey; Breann Kluck, College of Saint Benedict, lab of Jill N. Barnes; Anfei Li, Cornell Univ., lab of Robin L. Davisson; Brandon Newmyer, Radford

Univ., lab of Mark A. Cline; Humphrey Petersen-Jones, Michigan State Univ., lab of Stephanie W. Watts; Marissa Saenz, Univ. of California, Davis, lab of Chao-Yin Chen; Amy Shiah, Univ. of California, San Diego, lab of Michael C. Hogan; Walter Wang, Univ. of Missouri, lab of Ronald J. Korthuis; and Brian Wynia, South Dakota State Univ., lab of Richard D. Minshall.

Awardees receive two years of APS undergraduate membership and a certificate of recognition.

These students were then eligible for the Bruce Excellence in Undergraduate Research Awards. They were required to make oral presentations of their posters to a subcommittee of Education Committee members and other APS members. A total of 24 Abstract Awardees competed, from which 11 Research Awardees were selected based on their knowledge of their research project. Each awardee received \$500 and a certificate of recognition. This year APS was pleased to receive additional support again from Dr. Isis and The Central Nervous System Section of the APS. In addition, support was also



Bruce Excellence in Undergraduate Research Awardees (not all present).

received from APS Members Marlowe W. Eldridge, Thomas F. Hopkins, Ida J. Llewellyn-Smith, and Thomas A. Pressley. Awards were presented by President Joey Granger during the special APS Undergraduate Poster Session. The awardees were: Larry Bachman, Jr., Univ. of California, San Diego, lab of Alan R. Hargens; Jennifer Frielle, Gettysburg College, lab of Sean D. Stocker; Michael Gowen, Univ. of Pittsburgh, lab of Bill J. Yates; Troy Green, William Jewell College, lab of Michael J. Wacker; David Hallowell, Brigham Young Univ., lab of David M.

Thomson; Alex Johnson, Univ. of Minnesota, Duluth, lab of Jeffrey S. Gilbert; Kaitlyn Kennard, Ursinus College, lab of Beth A. Bailey; Breann Kluck, College of Saint Benedict, lab of Jill N. Barnes; Humphrey Petersen-Jones, Michigan State Univ., lab of Stephanie W. Watts; Brandon Newmyer, Radford Univ., lab of Mark A. Cline; and Brian Wynia, South Dakota State Univ., lab of Richard D. Minshall.

APS congratulates all these students on the quality of their research and presentations.

The awards are 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. ❖



Bruce Outstanding Undergraduate Abstract Awardees (not all present).

2012 APS/NIDDK Minority Travel Fellows Attend Experimental Biology in San Diego, CA

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. Forty-two Fellows attended the APS annual meeting, Experimental Biology (EB) in San Diego from April 21-25, 2012.

Fellows in the 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 "meeting mentors" to the Fellows for the duration of the conference. Thanks to the time and expertise offered by mentor volunteers, Fellows were able to expand their network of professional colleagues.

During EB, several events were offered as part of the Minority Travel program including an orientation and reception on Saturday afternoon, a networking breakfast on Monday, and a luncheon on Wednesday. All events were very well-attended by Fellows, meeting mentors, Porter Fellowship Committee members, and members of the APS leadership, including APS President-elect Sue Barman and Executive Director Marty Frank. During the networking breakfast on Monday, students and meeting mentors had the opportunity to interact with

one another again to exchange contact information, provide career-related answers or advice, and introduce students to other possible mentors in their particular research areas and/or geographical areas. This year the early morning networking breakfast was very well-attended and productive.

In 2011, in a Science article by Ginther et. al., the authors discovered that after controlling for the applicant's educational background, country of origin, training, previous research awards, publication record, and employer characteristics, Black applicants remain 10 percentage points less likely than whites to be awarded NIH research funding. The results suggested some leverage points for policy intervention. During the NIDDK Minority Travel Fellows luncheon, participants were encouraged to self identify themselves as minority scientist. By identifying as minority scientist, organizations can be made aware of a diverse pool of individuals eligible for leadership positions and also help funding agencies with possible policy interventions. Therefore, the Porter Committee launched a "Be Counted" campaign, which encourages ALL APS members to complete their member profile, including information on gender, racial and ethnic group, and interest area.

As always, the Wednesday luncheon was another great opportunity for students and mentors to solidify their interaction and discuss or clarify concepts learned and acquired during the meeting. The highlight of the luncheon was the keynote address given by

Richard Nakamura, acting-Director of the Center for Scientific Review, NIH. Nakamura's speech was centered around the Porter Physiology Development Committee's "Be Counted" campaign and highlighted the importance of self-identification as minority physiologists. This talk was well received by the Fellows, Meeting Mentors, APS Council, Committee Members, and staff.

Nakamura spoke about his personal experiences that contributed to both his impediments and successes in achieving a successful research career. He made insightful arguments about the importance of being identified as a minority scientist and stressed the responsibility of promoting success of future minority scientists.

Nakamura received his Bachelor of Arts in Psychology from Earlham College and his PhD in Psychology from State Univ. of New York (Stony Brook, NY). He was with the National Institute of Mental Health from 1976-2011. In 2001, he received the NIH-Asian/Pacific American Organization (APAO) Outstanding Achievement Award for Administrative Work. In 2002, Nakamura was elected by the American Association for the Advancement of Science (AAAS) to the status of AAAS Fellow. Also in 2002, Nakamura was awarded the Presidential Rank Award for outstanding leadership. In 2004 and 2005 respectively, he received leadership awards from the Federation of Behavioral Psychological and Cognitive Sciences, and from the



Richard Nakamura (CSR, NIH), Keynote Speaker at the APS/NIDDK Minority Travel Fellow Award Luncheon.



Luncheon Panelists L. Gabriel Navar (Tulane), Mildred Pointer (North Carolina Central) and Martin Frank (APS).

International Society for Behavioral Neuroscience. In 2009 he was awarded the NIH Director's Award for Outstanding Administration. The presentation will be available online later this summer.

Following Nakamura's talk, a panel discussion was lead by Martin Frank, (APS Executive Director), L. Gabriel Navar, (Tulane Univ. School of Medicine), and Mildred Pointer, (North Carolina Central Univ.). The panel speakers gave their individual perspectives on being identified as a minority scientist. Minority scientists attending the luncheon offered additional input and posed interesting issues related to spreading the burden of training and

support to non-minority scientists and of recognition for these additional activities. At the end of the Panel discussion it was suggested that there are still disproportionate barriers to the success of minority physiologists.

After the Panel discussion an announcement was made by Nakamura about a newly launched opportunity for minority physiologists desiring experience with NIH grant review process, the Early Career Reviewer program. The intent of this initiative is for minority PIs to gain experience by acting as reviewers of a light-load of proposals which can then lead to improved success in their own grant applications. Minority PIs will

be considered for these positions by submitting a current CV or biosketch along with a list of terms that describe your scientific expertise to CSRearlyCareerReviewer@mail.nih.gov. For further information about this program, visit <http://public.csr.nih.gov/ReviewerResources/BecomeAReviewer/Pages/Overview-of-ECR-program.aspx>.

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 attending US Institutions and conduct-

APS Travel Fellows and Meeting Mentors at Experimental Biology 2012:

Fellow

Sherry Adesina, Emory Univ.
Nicholas Aguirre, Univ. of California, Davis
Kevin Anderson, UCSD Medical Center, Hillcrest
Stan Andrisse, Saint Louis Univ.
Christopher Arellano, Univ. of Colorado at Boulder
Alfonso Brito, California State Univ., Los Angeles
Amber Brown, Tennessee State Univ.
Kristen Brown, Univ. of Michigan
Tahisha Buck, Univ. of Oregon
Denise Coley, Univ. of Louisville
Heidy Contreras, Univ. of La Verne
Mark Cunningham, Univ. of Florida
Bethany Davis, Univ. of North Dakota
Mary Garcia-Cazarin, Univ. of Kentucky
TanYa Gwathmey, Wake Forest Univ.
Anniesha Hack, Johns Hopkins Med. Inst.
Ronee Harvey, Mayo Clinic
Debra Irsik, Univ. of Nebraska
Annet Kirabo, Vanderbilt Univ.
Sydney Lopez, Univ. of California, Davis
Keisa Mathis, Univ. of Mississippi
Monica Nadal-Quiros, Univ. of Puerto Rico
Michael Ongele, Howard Univ.
Elimelda Onger, North Carolina A & T State Univ.
M. Cecilia Ortiz-Capisano, Henry Ford Hospital
Jaume Padilla, Univ. of Missouri
Ricardo Paez, Massachusetts Inst. of Tech.
Ana Palei, Univ. of Mississippi
Daniel Paredes, Univ. of New Mexico
Neil Phillips, Univ. of Florida
Kristi Porter, Emory Univ.
Vanesa Ramseyer, Henry Ford Hospital
Abigail Ruiz-Rivera, Ponce School of Medicine
Marissa Saenz, Univ. of California, Davis
Lakeisha Tillery, Meharry Medical College
Ashlee Tipton, Georgia Health Sciences Univ.
Inimary Toby, Univ. of Oklahoma Health Sciences Center
Jose Pablo Vazquez-Medina, Univ. of California, Merced
Jose Viscarra, Univ. of California, Merced
Junie Warrington, Univ. of Oklahoma
Annie Whitaker, LSUHSC-NO
Clintoria R. Williams, Emory Univ. /Atlanta VA Med. Ctr.

Meeting Mentor

Norma Beatriz Ojeda-Gamarra, Univ. of Mississippi Med. Ctr.
Peter J. Horvath, Univ. of Buffalo
Michael P. Massett, Texas A&M Univ.
Li Wang, Univ. of Utah School of Medicine
Raffaele Pilla, Univ. of South Florida
Erin Leigh Glynn, Duke Univ.
Richard D. Wainford, Boston Univ. School of Medicine
Robert L. Hamlin, Ohio State Univ.
Margarita C. Curras-Collazo, Univ. of California, Riverside
Magdalena Alonso-Galicia, Forest Research Institut
Mentor to Jose Viscarra
M. Lourdes Alarcon Fortepiani, Univ. of Incarnate Word
Ryan Harris, Georgia Health Sciences Univ.
Johana Vallejo-Elias, Midwestern Univ.
Mentor to Annie Whitaker
Carole M. Liedtke, Case Western Reserve Univ.
Eric Thorin, Univ. de Montréal
Carmen Hinojosa-Laborde, Institute of Surgical Research
Mentor to Marissa Saenz
Alice R. Villalobos, Texas A&M Univ.
Jennifer Case Sullivan, Georgia Health Sciences Univ.
Maria Jose Alves Rocha, Forp/Univ. of Sao Paulo
Rudy M. Ortiz, Univ. of California
Dexter L. Lee, Howard Univ.
Joel C. Heimann, Univ. of Sao Paulo School of Medicine
Andrew Shanely, Appalachian State Univ.
Thomas C. Resta, Univ. of New Mexico Health Sci. Ctr.
Eugene W. Shek, Abbott Laboratories
Adebawale Adebisi, Univ. of Tennessee Health Sci. Ctr.
Caroline B. Appleyard, Ponce School of Medicine
Nikki L. Jernigan, Univ. of New Mexico
Larry D. Alexander, Midwestern Univ.
Maureen Basha, Georgetown Univ.
Annet Kirabo, Vanderbilt Univ.
Scott Boitano, Univ. of Arizona Health Science Center
Jan M. Williams, Univ. of Mississippi Medical Center
Mentor to Jose Pablo Vazquez-Medina
Inimary Toby, Univ. of Oklahoma Health Sciences Center
Heidy Contreras, Univ. of La Verne
Gina C. Schatteman, Univ. of Iowa
TanYa Gwathmey, Wake Forest Univ.
Mohammad Newaz, Chicago State Univ.

ing research within the 50 states and US Territories. The specific intent of this award is to increase participation of pre- and postdoctoral minority stu-

dents 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/minoritytravel>. For more information about the "Be Counted" campaign, visit www.the-aps.org/becounted. ❖



APS Travel Fellows at EB 2012.

Undergraduate Summer Research Fellows Attend EB

The 2011 Undergraduate Summer Research Fellows (UGSRFs) came to the 2012 Experimental Biology meeting held in San Diego, CA to report on their research findings from last summer.

Twenty-two of the 24 UGSRFs attended the meeting. Nineteen of the UGSRFs were first authors on 19 abstracts submitted to the meeting. Susan Barman, APS President-elect, congratulated the UGSRFs on their scientific research efforts and presented them with certificates for completing their fellowship.

For the fifth year, all undergraduates who had first-author posters were invited to a special Undergraduate Orientation Session. The UGSRFs were joined by the finalists for the David S. Bruce Awards for Excellence in Undergraduate Research, in addition to approximately 30 other undergraduates for the session. Thomas Schmidt, Chair of the Career Opportunities in Physiology and

Committee, welcomed the undergraduates and introduced the UGSRFs. Thomas Pressley, Chair of the Education Committee, introduced the Bruce finalists and reminded the undergraduates about the special Undergraduate Poster Session on Sunday. Jennifer Sasser, Chair of the Trainee Advisory Committee, gave a presentation on attending a 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. Susan Marsh, member of the Careers Committee, gave a talk on poster presentations and hints for making that a positive experience. Members of the Career Opportunities in Physiology and Trainee Advisory

Committees attended the session and sat among the undergraduates to offer their own advice.

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. ❖



Undergraduates get to know each other at the undergraduate orientation session.



Thomas Schmidt, Chair of the Career Opportunities in Physiology Committee and the 2011 Undergraduate Summer Research Fellows.

Undergraduate Research Highlighted at Special EB Session

EB 2012 provided the setting for the ninth 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. This year it was held again on Sunday afternoon and culminated with the presentation of the David S. Bruce Excellence in Undergraduate Research Awards and the awards for the second APS Video Contest: APS Presents:...Phantastic Physiology Voyage: "Function Follows Form."

Of the 147 undergraduate first authors invited to present at the APS Undergraduate Poster Session, 107 accepted the invitation and took advantage of the opportunity to display their poster and present it to interested scientists and guests. In addition, APS was joined for a second year by undergraduate students from the American Association of Anatomists (AAA). An additional 18 anatomy undergraduate presenters were there to participate in the session along with AAA society members. Approximately 200 APS and AAA 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 their research were highlighted again this year in a special printed program distributed during the session.

The session not only provided all



Exhibitors from various physiology departments and graduate programs talk with undergraduates about graduate opportunities.

these 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. This is the sixth year that graduate departments were invited to sponsor the session and display promotional materials for their departments to those undergraduates considering graduate school. This year the departments and students arrived 30 minutes before the session to allow the students to spend time with the departments without having to leave their posters. The following 12 schools participated: Univ. of Arizona, Physiological Sciences Graduate Interdisciplinary Program; Univ. of Florida, Department of Physiology & Functional Genomics; Louisiana State Univ. Health Sciences Center,

Department of Physiology; Mayo Clinic College of Medicine, Physiology and Biomedical Engineering Graduate Program; Medical College of Wisconsin, Department of Physiology; Michigan State Univ., Department of Physiology; Univ. of Missouri, Department of Biomedical Sciences; Saint Louis Univ., Graduate Program in the Biomedical Sciences; Texas A&M Health Science Center, School of Graduate Studies; Texas Tech Univ. Health Sciences Center, Graduate School of Biomedical Sciences; Univ. of Texas Health Science Center at Houston, Graduate Program in Cell & Regulatory Biology, Department of Integrative Biology & Pharmacology; and Virginia Commonwealth Univ. School of Medicine, Department of Physiology; and Biophysics

The departments also received a list of undergraduate presenters who indicated they were interested in being contacted about attending graduate school.

APS looks forward to hosting APS Undergraduate Poster Sessions at future Experimental Biology meetings and encourages undergraduate students doing research in physiology to submit abstracts for EB, apply for the David Bruce award, and attend the poster session in 2013.

Departments who are interested in sponsoring the 2013 Undergraduate Poster Session and displaying materials for their departments are encouraged to contact the APS Education Office (education@the-aps.org). ❖



Undergraduates discuss their research with APS members.

University of Missouri-Columbia Undergraduates Win Second Video Contest

Seth Fairfax, T. Luise King, Jacqui Crissey, Douglas Oberlin, and Leryn Boyle of Univ. of Missouri, Columbia are the second recipients of the APS Presents...Phantastic Physiology Voyage 2012: "Function Follows Form" Video Contest First Place Award. Their video was entitled "Cardiovascular Physiology for Grandma."

Facundo Mendes Abregu, Garrido Abregu, Daina Suarez di Salvo, Sofia Aguirre of the Univ. de Buenos Aires won the Viewers' Choice Award for the contest, receiving about 6,000 hits on their video entitled "Exercise Physiology-Fisiologia del Ejercicio" created in both English and Spanish.

The video contest encourages undergraduate and graduate students to cre-

atively connect with physiology and engages them with the broader public through a short video contest. These videos would creatively demonstrate and/or explore a specific physiological function in five minutes or less. Videos can be staged as a short play, commercial, news broadcast, talk show, music video, documentary, etc.

The APS Career Opportunities in Physiology Committee chaired by Thomas Schmidt (Univ. of Iowa) selected the award-winning video from the applicants. The winning video was chosen based on originality, creativity, and quality of the video; whether the video explained the scientific principle at issue clearly and accurately; whether the video made physiology more inter-

esting and relevant; and overall impact.

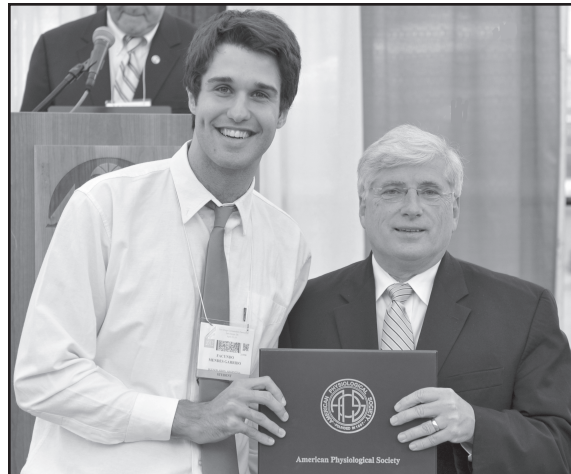
Finalist videos were then advertised on the APS website and Facebook pages to encourage members and guests to review and vote for their favorite on YouTube. Voting was closed during the EB meeting and the Viewers' Choice Award given based on the total number of YouTube views.

The award-winning video team received \$750 and certificates of recognition. The Viewer's Choice Award team received \$250 and certificates of recognition.

Awards were presented during the Undergraduate Poster Session held during EB. APS congratulates these awardees. ♦



President Joey Granger congratulates 2012 1st-Place Video Contest awardee Seth Fairfax, representing the group of awardees from the Univ. of Missouri, Columbia.



President Joey Granger congratulates 2012 Viewer's Choice Video Contest awardee Facundo Mendes Garrido Abregu, representing the group of the awardees from the Univ. de Buenos Aires.

Physiology In Perspective: The Walter B. Cannon Award Lecture

This lectureship is awarded to an outstanding physiological scientist, domestic or foreign, who is an APS member. The recipient is selected by the President-Elect in recognition of his/her original and outstanding accomplishments in the field of physiology. The recipient presents a lecture on "Physiology in Perspective" during the plenary session of the Experimental Biology meeting, addressing Cannon's concepts of "The Wisdom of the Body." The lecture is considered for publication in the Society journal of their choosing. The recipient receives an honorarium of \$4,000, a plaque, and reimbursement of expenses incurred in association with delivery of the lecture. The membership is invited to submit nominations for this lecture. A nomination shall be accompanied by a candidate's curriculum vitae and one letter detailing the individual's status and contributions.

The Walter B. Cannon Award Lecture is generously supported by The Grass Foundation.

Nominations will now only be accepted via online submission. Please go to <http://www.the-aps.org/awardapps> to submit your nomination. **Nomination Deadline:** October 1.

2011 Frontiers in Physiology Teachers Complete Fellowship Year

Frontiers in Physiology Research Teacher Fellows completed their fellowship year in April with their attendance at EB 2012 in San Diego. Seventeen middle and high school teachers from across the nation began this course in April of 2011 and progressed through the online professional development lessons for nine months. The Frontiers in Physiology Program was funded by a NCRR Science Education Partnership Award (SEPA) grant and generous support from APS. Teachers participated in reading, sharing of resources, experimental design, poster sessions, discussion boards, lesson development, peer reviews, production of Bench-to-Bedside Primers (comparing basic and clinical research), and pre- and post-fellowship content surveys and physiology tests. This class also participated in the Science Teaching Forum (STF) in Warrenton, VA last July. Lead Mentor Instructor Robert Manriquez (2005) was assisted by Mentor Instructors Monica Erwin (2008) and Anne Joy (2009) in leading the week long STF program modeling inquiry methods for use in the classroom. Barbara Goodman served as this year's Physiologist-in-Residence, giving valuable insight to the RTs as they prepared their own Six Star

Science lessons. Overall, teachers from 12 states completed this rigorous 13-month professional development fellowship, learning not only about physiology but about the best ways to help their students learn science via the scientific method.

The teachers completing the program include:

- Laura Carlino, Upper St. Clair High School, Upper St. Clair, PA, with Bill Yates, Univ. of Pittsburgh, Pittsburgh, PA;
- Elizabeth Charleston, York Country Day School, York, PA, with Leonard S. Jefferson, Penn State Univ. College of Medicine, Hershey, PA;
- Nelia Delos Reyes, Hartman Middle School, Houston, TX, with Rolando E. Rumbaut, Baylor College of Medicine, Houston, TX;
- Laura (L.B.) Fogt, Olathe North High School, Overland Park, KS, with Shrikant Anant, Kansas Univ. Medical Center, Kansas City, KS;
- Ashley Ivins, Mescalero Apache High School, Mescalero, NM, with Nancy Kanagy, Univ. of New Mexico Health Sciences Center, Albuquerque, NM;
- Jane Raabis, North High School, Worcester, MA, with Stephen Doxsey, Univ. of Massachusetts Medical School,

Worcester, MA;

- Devalyn Rogers, Pershing Middle School, Houston, TX, with Patrick M. Dougherty, Univ. of Texas M.D. Anderson Cancer Center, Houston, TX;
- Pauline Schork, Clinton High School, Clinton, WI, with Kathryn M.S. Johnson, Beloit College, Beloit, WI;
- Stacy Schurtz, Pike Township School District, Indianapolis, IN, with C. Subah Packer, Indiana Univ. School of Medicine, Indianapolis, IN;
- Sue Speirs, Grosse Pointe Public Schools, Grosse Pointe Woods, MI, with Patrick Joseph Mueller, Wayne State Univ. Medical School, Detroit, MI;
- Chris Stotts, J. Frank White Academy, Harrogate, TN, with Stan C. Kunigelis, DeBusk College of Osteopathic Medicine;
- Lucina Velasquez-Lopez, Flowing Wells High School, Tucson, AZ, with Thomas L. Pannabecker, Univ. of Arizona, Tucson, AZ; and
- Leslie Worton, Edison High School, Fresno, CA, with Henry A. Lester, California Institute of Technology, Pasadena, CA.

For more information on the Frontiers program, see <http://www.frontiersinphys.org>. ♦



2011 Frontiers Research Teachers and Mentor Instructors at EB 2012.

Learning How to Share the PhUn at the EB 2012 Physiology Understanding Week Training Session

Twenty poster presenters described strategies for outreach and hands-on physiology-related activities across primary, elementary, middle, and high school levels at the Physiology Understanding (PhUn) Week Training Session at EB 2012. The poster session format was introduced last year to foster a community of sharing best practices and grassroots outreach efforts by APS members who participate in the APS annual Physiology Understanding Week (PhUn Week) outreach program each the fall (www.PhUnWeek.org). In addition to classroom activities, topics included working with a teacher, recruiting and training of a volunteer team, and organizing special community events. APS Education Committee member Michael Ryan organized and opened the poster session. Approximately 100 attendees flowed through the 90-minute open poster session. The continental breakfast session was co-sponsored by the APS and ADInstruments, Inc.

The following is a presenters and poster titles list. Posters can be found in a collection at the APS Archive of Teaching Resources using the Archive address listed in the below the title.

- Heidy Contreras: PhUnWeek 2011 at Tucson Magnet High School: Integrating APS Volunteers into High School Curriculum: <http://www.apsarchive.org/resource.cfm?submissionID=6742>.
- Jennifer Uno: Bringing "PhUn" into the Community in Burlington, NC
- Jessica Dominguez: Students

Explore Sensory Perception at the Science Fun for Kids 9 to 99 Festival at a Local Community College: <http://www.apsarchive.org/resource.cfm?submissionID=6720>.

- Kathryn Johnson & Pauline Schork Elementary PhUn Fair: Using Inquiry-Based Learning to Teach Physiology in the High School Classroom and the Community: <http://www.apsarchive.org/resource.cfm?submissionID=6837>.

- Natalie Rodriguez: Hopscotch Through the Heart: Teaching Cardiovascular Physiology to 2nd Graders: <http://www.apsarchive.org/resource.cfm?submissionID=6719>.

- Mark Cunningham: A Day with a Physiologist: Hands on Experiments for Elementary School Students <http://www.apsarchive.org/resource.cfm?submissionID=6722>.

- Christine Schnackenberg: Exploring Human Physiology Each Year in Elementary School: Sequential Introduction to Physiological Systems in Grades 1-5.

- Kim Hieng: The Heart: See it, Feel it, Hear it, and Work it!

- Jennifer Sullivan: Customized PhUn Week Activities to Reinforce Classroom Curricula in Elementary School: <http://www.apsarchive.org/resource.cfm?submissionID=6713>.

- Michael Ryan: Interactive Stations and Demonstrations to Teach Renal and Cardiac Physiology to Sixth Grade Students: <http://www.apsarchive.org/resource.cfm?submissionID=6774>.

- Patricia Halpin: Getting Fourth-Graders Excited About the Cardiovascular System

- Carmel McNicholas-Bevensee: Physiology Outreach to K1-K4 Students: <http://www.apsarchive.org/resource.cfm?submissionID=6758>.

- Jessica Taylor: Use of Colored Fabric to Denote Blood Oxygenation Status to Various Simulated Body Tissues During Rest and Exercise <http://www.apsarchive.org/resource.cfm?submissionID=6721>.

- Helena Carvalho: PhUn Experience: Middle School Students Teaching Physiology to Elementary School Students

- Roy Sutliff: Introducing High School Anatomy and Physiology Students to Genotype and Phenotype

- Dexter Lee: The "Who, How, What and Application" of Physiology

- John Young: The Digestive System (How to Make Poop)

- Caroline Appleyard: Outcomes of Puerto Rico Physiological Society Participation in Physiology Understanding (PhUn) Week 2011: <http://www.apsarchive.org/resource.cfm?submissionID=6714>.

- Rayna Gonzales: The American Physiological Society PhUn Day Event 2011 at the University of Arizona COM-Phoenix in Collaboration with the COM-Phoenix Office of Outreach and Multicultural Affairs

- Inimary Toby: Challenges and Opportunities for PhUn week outreach in Oklahoma City Public Schools. ❖



PhUn Week Poster Session EB 2012.



Attendees at the PhUn Week Poster Session examine one of the posters.

New Regular Members

*transferred from student membership

Eduardo Limongi Marques De Abreu
Univ. of Missouri

Kamran Afzal
Majmaah Univ., Saudi Arabia

Nima Alamdari
Harvard Med. School, MA

Udayan Apte
Univ. of Kansas, Med. Ctr.

Manjot Bal
Univ. of Texas SW Med. Ctr.

Corina Balut
Univ. of Pittsburgh, PA

Joseph A. Beatty
Univ. of Texas, San Antonio

Lusiane Maria Bendhack
Univ. of São Paulo, Brazil

Henri Bernardi
INRA, Montpellier, France

Faraz Ahmed Bokhari
Fed. Postgraduate Med. Inst., Pakistan

Carol Ann Boliek
Univ. of Alberta, Canada

Vladimir E. Bondarenko
Georgia State Univ.

Roberto Bottinelli
Univ. of Pavia, Italy

Bradley Edward Britigan
Univ. of Nebraska Med. Ctr.

James W. Cagle
Northern Hospital Assoc., CO

Santiago Camacho
Mexico City Gen. Hosp., Mexico

Anthony Carlsen
Univ. of Ottawa, Canada

Marcus Carlsson
Univ. of Lund, Sweden

Yeong-Renn Chen
Northeast Ohio Med. Univ., OH

Helen Elizabeth Collins
Univ. of Alabama, Birmingham

Debora S.A. Colombari
Sao Paulo State Univ., Brazil

Emmanuelle Cordat
Univ. of Alberta, Canada

Daniel P. Credeur
Univ. of Missouri, Columbia

Ana Paula Davel
State Univ. of Campinas, Brazil

Guillaume FH De Lartigue
Univ. of California, Davis

Prarhakar Deonikar
Wayne State Univ., MI

Massimiliano Di Luca
Univ. of Birmingham, UK

Kottarappat N. Dileepan
Univ. of Kansas Med. Ctr.

Christine Marie Donmoyer
Allegheny College, Meadville, PA

Kenneth S. Dyson*
Univ. De Montreal, Canada

Ashraf El-Meanawy
Med. College of Wisconsin

Sanah Essayagh
Univ. of South Florida

Dayton Ford
St. Louis College of Pharmacy, MO

Yan Gai
Univ. of Wisconsin, Madison

Nehal Bahgat Gamil
Ain Shams Faculty of Medicine, Egypt

Emily Merryman Garland
Vanderbilt Univ., TN

Aditya Ashok Kumar Goel
Amgen Inc., South San Francisco, CA

Zhizhan Gu*
Harvard Med. Sch., MA

Shailesh Gupta
Banaras Hindu Univ., Varanasi, India

Philip A. Gurnev
NIH/NICHD, MD

Ranier Gutierrez
CINVESTAV-IPN, Mexico

B. Michelle Harris
Univ. of the District of Columbia

Rawad Hodeify
Univ. of Arkansas for Med. Sci.

Yoshikazu Isomura
Tamagawa Univ., Japan

Brijendra B. Jain
Yashoda, India

J. Darwin King
Univ. of Pittsburgh, PA

Timothy R. Koves
Duke Univ., NC

Michelle C. LaPlaca
Georgia Inst. of Tech. / Emory Univ.

Adam S. Laprad
San Francisco, CA

Rebecca Danti Larson*
Univ. of Georgia

Robert John Lee
Univ. of Pennsylvania Sch. of Med.

Sewon Lee
Univ. of Missouri, Columbia

Yoonkwang Lee
Northeast Ohio Med. Univ.

Marcelo Bichels Leitao
CLINICOR, Brazil

Chi Kwan Leung
Univ. of Florida

Kyungjoon Lim
Baker IDI Heart/Diabetes Inst.,

Melbourne, Australia

Alice P. Liou
Massachusetts Gen. Hospital

Jie Liu
Univ. of Sydney, Australia

German O. Lopez-Riquelme
Univ. Nat'l. Autonoma, Mexico

Francis W. Luscinskas
Brigham and Women's Hospital, MA

Rocio Montoya
Univ. Michocana De San Nicolás De

Hidalgo, Mexico

Moustafa Bayoumi Moustafa
CA State Polytechnic Univ., Pomona

Madhusudan Natarajan
Shire HGT, Lexington, MA

Ernest Niebur
Johns Hopkins Univ., Baltimore, MD

Brian J. Nieman
Hospital for Sick Children, Canada

Marie-Cécile Nollevaux
CHU Mont-Godinne, Yvoir, Belgium

Lucy Jane Norcliffe-Kaufmann
New York Univ., Sch. of Med.

Anthony Obioma Nwaopara
Ambrose Alli Univ., Nigeria

Jude C. Nwoga
Univ. of St Augustine for Health Sci., FL

Luke O. Nwoye
King Khalid Univ., Saudi Arabia

Donal Joseph O'Gorman
Dublin City Univ., Ireland

Onyekwere U. Onwumere
City Univ. of New York, Bronx

Jaqueline Sonoe Ota Arakaki
Fed. Univ. of São Paulo, Brazil

Trairak Pisitkun
NIH, MD

Kinning Poon
Rockefeller Univ., New York

Dan N. Predescu
Rush Univ., IL

Priya Raman
Northeast Ohio Med. Univ.

Limor Raz
Mayo Clinic, MN

Alberto Recio-Spinoso
IDINE, Albacete, Spain

Andrew George Robson
Western General Hosp., UK

Blanca Rodriguez
Univ. of Oxford, UK

Sandra Romero-Suarez
Univ. of Missouri, Kansas City

R. Dan Rudic
Georgia Health Sci. Univ.

Paul Sajda
Columbia Univ., NY

Milap S. Sandhu*
Univ. of Florida, Gainesville

Joshua P. Scallan*
Univ. of Missouri, Columbia

Thies Schroeder
Duke Univ., NC

Subramanian Senthivinayagam
Michigan State Univ.

Mohd Shahid

Harvard Med Sch, Boston, MA

Don Sin

St. Pauls Hospital, Canada

Peter William Stubbs

Emilio Aguinaldo College, Philippines

Barathi Singaravel Subramaniam

Melaka Manipal Med. Coll., India

Manikandan Sundaramahalingam

Tagore Med. Coll. and Hosp.,
Chennai, India

Wanchun Tang

Weil Inst. of Critical Care Med., CA

Baskaran Thyagarajan

Univ. of Wyoming, Laramie

Elena Tolkacheva

Univ. of Minnesota

Corey R. Tomczak

Univ. of Alberta, Canada

Neetu Tyagi

Univ. of Louisville, KY

Jeffrey Lee Vallet

USMARC, Clay Center, NE

Jamie Ian Vandenberg

Victor Chang Cardiac Res. Inst.,
Australia

L. J.C. Van Loon

Maastricht Univ., Netherlands

Sharat Jacob Vayttaden

NIAID, NIH, MD

Sadasivan Vidyasagar

Univ. of Florida, Gainesville

Sarah M. Wells

Dalhousie Univ., Canada

Adrian Robert West

Dalhousie Univ., Halifax, Canada

Kristin Westphalen

Columbia Univ., NY

James White

Harvard Med. School, MA

Rosann Jennifer Wilcox

State Univ. of New York, Saratoga
Springs

Patricia A. Wright

Univ. of Guelph, ON, Canada

Utako Yokoyama

Yokohama City Univ., Japan

Blaise Yvert

CNRS & Univ. Bordeaux, Talence
Cedex, France

Feng Zhang

Univ. of Oklahoma HSC

Yanqiao Zhang

Northeast Ohio Med. Univ.

Guohua Zhang

Univ. of Texas HSC, Houston

Wei Zou

California Dept. of Public Health,
Richmond

Christian Zuppinger

Univ. of Bern, Switzerland

New Graduate Student Members

Simon Brian Adamson

Univ. Abertay Dundee, UK

Olusola Olufemi Alabi

Umea Univ., Sweden

Elsie Stephanie Afidelali Amedonu

Univ. of Ghana

Yadu Balachandran

Univ. of Saskatchewan, Canada

Jacob Daniel Brown

Univ. of Missouri

Kirsty Brown

Univ. of British Columbia, Canada

Maria Castaneda

Natl. Univ. of Mexico

Bei Chen

Univ. of Florida

Michelle L. Clark

Univ. of South Dakota

Jeannine Marie Crum

Wright State Univ., OH

Vishal Diwan

Univ. of Queensland, Australia

Bradley Endres

Medical College of Wisconsin

Brian Steven Ferguson

Auburn Univ., AL

Thiago Juca Gagliano

Univ. Fed. Do Rio De Janeiro, Brazil

Xiang Gao

Uppsala Univ., Sweden

Alan Aidan Gurler

Univ. of Southern California

Krist Norman Hausken

Univ. of New Hampshire

Amanda Hays

Univ. of Kansas Medical Ctr.

Erica Heinrich

Univ. of California, Irvine

Jessica Inskip

Simon Fraser Univ., Canada

Pareesh Prahlad Kulkarni

Banaras Hindu Univ., India

Alexander W. Lohman

Univ. of Virginia

Wentong Long

Univ. of Alberta, Canada

Jessica Ashley Macumber

Univ. of Idaho

Tu Hoang Anh Mai

Vanderbilt Univ., TN

Carrie Michelle Maloy

St. Louis Univ., MO

Lorena Martin

Univ. of Miami, FL

Julie Biernat McLean

Univ. of Kentucky

Tam L. Nguyen

Texas A&M Univ.

Charity Uyinmwun Osifo

Ambrose Alli Univ., Nigeria

Gabriela Perez Flores

Univ. Autonoma De San Luis

Potosi, Mexico

Bhola Raj Pokhrel

Kathmandu Univ., Nepal

Melissa Jean Puppa

Univ. of South Carolina

Stuart Michael Roche

Univ. of Michigan

Lorena Rojas

National Univ. of Mexico

Mustapha Shehu

Ahmadu Bello Univ., Nigeria

R ajkumar Arbind Singh

Regional Inst. Med. Sci., India

Jitendra Kumar Sinha

Natl. Inst. of Nutrition, India

Marty Daniel Spranger

Wayne State Univ., MI

Mitchell G. Springer

Univ. of Pittsburgh, PA

Sridhar Srinivasan

Univ. of Florida

Akida O. Stallworth

Chicago State Univ., IL

Shingo Takada

Hokkaido Univ., Japan

David Torres Tirado

Univ. Autonoma De San Luis

Potosi, Mexico

Avner Wallach

Weizmann Inst. of Sci., Israel

Sharon Elaine Warner

Royal Veterinary College, UK

Cassie Marie Welch

Univ. of Idaho

Amanda Leigh Woerman

George Washington Univ., DC

Jing Wu

Vanderbilt Univ., TN

Jia-Ping Wu

China Medical Univ.

Kai Yuan

Kansas State Univ.

Rachel M. Zarndt

Univ. of California, San Diego

New Undergraduate Student Members

Chasy Arangorin Amado
Univ. of Guam

Rees Allen Burt
Univ. of East Tennessee

Kwame Novinyo Doh
Howard Univ., DC

Christian E. Donald
Morehouse College, MI

Sean Phillip Duminie
Univ. of Illinois

Madeline Espineira
Univ. of Arizona

Mata Temukisa-Solomona Faiai
Chaminade Univ. of Honolulu, HI

Adam Fellows
Oxford Univ., UK

Karl Fisher
The Univ. of Leeds, UK

Binyam Mezgebe Fitwi
Univ. of Texas, Arlington

Damian Jozef Flis
Gdansk Univ., Poland

Allyson Mia Fukuyama
Occidental College, HI

Juan Gabriel Garcia
Univ. of Texas, Austin

Facundo Mendes Garrido
Univ. De Buenos Aires, Argentina

Briaira Geiger
Richard Stockton College, NJ

Jeremy-Ann Guzman Ham
California State Univ.

Zakkary J. Hardyniec
Alma College, Univ. of Kentucky

Danny Herrera
Montgomery College, MD

Naava Hadassah C.C. Honer
Wright State Univ., OH

Vidyasagar Jha
Dr. MGR Educ. and Res. Inst., India

Woojin Joo
Chapman Univ., CA

Hiwot Kassaye
Smith College, MA

Jasdeep Kaur
Wayne State Univ., MI

Zulqarnain Khan
Univ. of Missouri

Christie Diane Kimball
Tulane Univ., LA

Alexandra Koba
San Francisco State Univ.

Jacob Dean Kohler
Ursinus College, PA

Ghiara Alexandra Lugo
Univ. of Puerto Rico

Matthew McCauley
Johns Hopkins Univ., MD

James William McCue
California State Univ., Los Angeles

Sofia Karin Helena Morsing
Karolinska Institutet, Sweden

Mai Lee Moua
Univ. of Minnesota

Christian Ludwig Munevar
Scripps Inst. of Oceanography, CA

Vincent Reginald Favor Narvaez
Univ. of California, Irvine

Jenn Nhan
Univ. of Utah

Amber Rose Dybdal Nielsen
Univ. of North Dakota

Uttara Partap
Williams College, MA

Timothy James Peterson
Univ. of Wisconsin

Michelle Alexis Ramirez
Univ. of Texas, Brownsville

Yariana Emma Rodriguez
Pontifical Catholic Univ., PR

Wennie Athena Sansing
Jackson State Univ., MS

Aman Shah
Univ. of Kentucky

Lorrie B. Sims
Univ. of Kentucky

Rachel Jessica Skow
Mount Royal Univ., Canada

Lu Ding Song
Xinqiao Hospital, China

Stephanie Marie Spehar
Univ. of Pittsburgh, PA

Matthew John Stewart
Johns Hopkins Univ.

Luke Stewart
East Carolina Univ., NC

Jarred Michael Stratton
Duquesne Univ., PA

Emily Anne Sullivan
Ball State Univ., IN

Orianna Paige Thomas
Johnson C. Smith Univ., NC

Ashley Turner
Virginia State Univ.

Alex Villalobos
Univ. of Texas, Arlington

Lisa Walker
Amherst College, MA

Molly Kathleen Watkins
Univ. of Minnesota

Titus Jevan Wongk
Western Univ. of Health Sci's., CA

Kirsten Wood
Louisiana State Univ., HSC,

New Orleans

Kenneth Lee Young

Colorado State Univ.

New Affiliate Member

Leon Neiman, Jr.
Alvernia Univ., PA

Recently Deceased Members

Howard A. Bern
Berkeley, CA

Emilia M. Hogan
New Haven, CT

Andrew Huxley
Cambridge, UK

Matthew N. Levy
Cleveland, OH

Leonard S. Rubin
Wynnewood, PA

Richard P. Spencer
Bloomfield, CT

William A. Spencer
Sterling, VA

Daniel J. Stone
Somers, NY

Ignatious L. Trapani
Depoe Bay, OR

Zofia Zukowska
Washington, DC

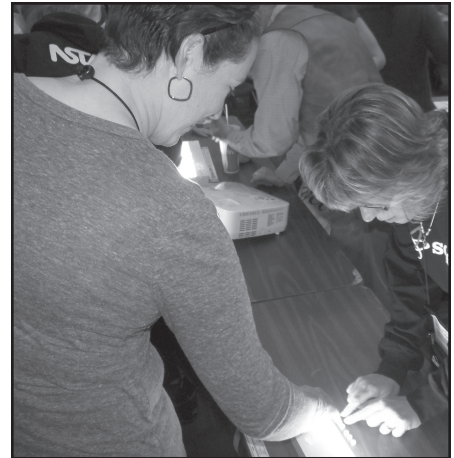
APS Promotes Physiology to Science Educators at National Science Teacher Association Conference in Indianapolis

The APS highlighted physiology to science teachers with two workshops presented by past Frontiers in Physiology Research Teachers and Online Teacher Fellows at the 2012 National Science Teacher Association's (NSTA) conference in late March. The annual national conference attracts K-12 teachers, as well as community college and four-year college instructors or faculty from across the nation.

There were 19 past and present Frontiers Fellows at the meeting with seven of them involved in workshop presentations. Norm Leonard (Pike High School: Indianapolis, IN) presented a workshop titled, "How to Teach Inquiry-based Science." He spoke from experience, gave examples, and demon-

strated techniques, showing step-by-step how inquiry-based science works. Leonard then discussed how to modify existing labs and make them more inquiry based.

Judy Barrere (Holy Family Parish School: Kirkland, WA); Landra Knodel (Irene-Wakonda Junior High School: Irene, SD); Georgia Everett (Tri-Central Middle School: Sharpville, IN); Mary Jennifer Olesa (East Washington Middle School: Pekin, IN); Marti Ann Mauntel (Dubois Middle School: Dubois, IN) presented "Changing Cookbook Labs into Inquiry Labs in Six Easy Steps." This group of Online Teacher Fellows demonstrated how easy it can be to convert a teacher-directed lab into an innovative inquiry-



Workshop participants explore the properties of UV beads during the Six Star Science Workshop.



Former RTs and OTs gather for a group picture after Norm Leonard's workshop.

based activity using the APS Six Star Science principles. After the demonstration, teachers at the workshop practiced with a hands-on activity.

An evening of fellowship that allowed many of the online fellows to meet for the first time was held on Friday night. Fellows from 1997-2011 were in attendance allowing the history and changes in the program to be shared and discussed. Next year should offer another opportunity for a reunion when the meeting is held in San Antonio, TX. ♦

Looking for a mentor?

You do not have to achieve academic success alone.

You need to cultivate your personal and professional network to reach your full potential. MentorNet is the most experienced web-based e-mentoring program in the world for mentors and mentees. The American Physiological Society invites you to take full advantage of this free service. You can choose to be a mentor or mentee at any stage of your career. MentorNet will help you build meaningful professional relationships.

Learn more at www.the-aps.org/mentornet. Join now at www.MentorNet.net!

APS Presents Awards to Outstanding High School Students at the 63rd Intel International Science and Engineering Fair

The 63rd Annual Intel International Science and Engineering Fair (ISEF), presented by the Intel Corporation, was held in Pittsburgh, PA May 14-18, 2012. The Intel ISEF is the world's largest international pre-college science competition. More than 1,500 students from 70 countries presented their research and competed for over \$3 million in scholarships and cash prizes. For the 20th year, the APS presented Special Awards in the form of cash prizes, certificates, t-shirts, and one year subscriptions to APS publications for the best projects in the physiological sciences. This year's APS judging team included Chris Woodman (Texas A&M Univ.), Catharine Clark (Cornell Univ.), Alan Sved (Univ. of Pittsburgh), Bill Yates (Univ. of Pittsburgh), David Hostler

(Univ. of Pittsburgh), Jodie Krontriss-Litowitz (Youngstown State), and Lynette Berdanier (Univ. of Georgia).

The David L. Lawrence Convention Center in downtown Pittsburgh was filled with posters displaying results from projects completed at home, in high schools, and at universities. Students were interviewed by judges representing a variety of disciplines, and had the opportunity to attend a panel discussion featuring eight Nobel Laureates. The APS judging team previewed almost 100 projects to select 36 projects that best fit the category of physiology. Each of the 36 finalists was interviewed by the APS judging team to evaluate the student's involvement in the project and to determine their understanding of the science and

experimental design behind the project. After two days of judging, the following students were selected to receive APS Awards for excellence in physiological research.

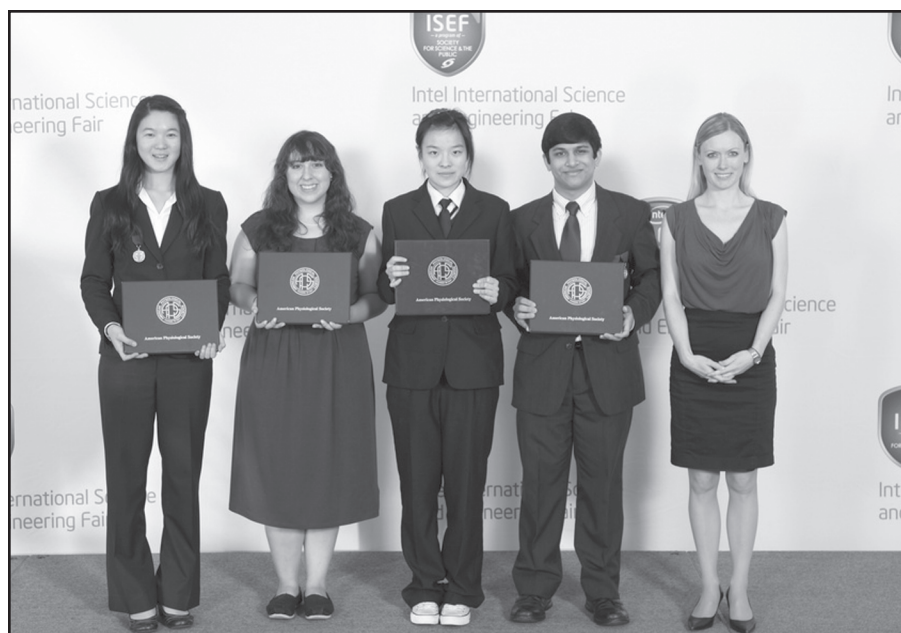
The first place APS award (\$1,500) was presented to Aprotim Bhowmik from Parkview High School in Lilburn, GA for his project titled "Arterial hemodynamics in atherosclerosis patients, a mathematical model." Aprotim also won a third place Grand Award in the Category of Medicine and Health (\$1,000).

The second place APS award (\$1,000) was presented to Peiyan Duan from Shanghai China for her project titled "Exploration of anti-diabetic compound in foxglove and its molecular mechanism of action." Peiyan also won a first place Grand award in the category of Biochemistry (\$3,000).

The third place APS award (\$500) was won by Christina Collins from Caddo Parish Magnet High School in Shreveport, LA for her project titled "The evaluation of small molecule inhibitors of PKM2, a downstream product of mTOR in neuroblastoma."

The APS Exceptional Science Award (\$500) was won by Christina Ren from Monte Vista High School in Danville, CA for her project titled "The effect of deer antler on the proliferation of endothelial cells in vitro."

The award winners were selected from many outstanding and worthy candidates. The APS judging team was impressed with the high level of science and presentations of all the finalists at the Intel ISEF meeting and had a difficult time selecting the winners. ♦



APS member Catherine Clark presented an award to the 2012 ISEF winners Aprotim Bhowmik, Peiyan Duan, Christina Collins and Christina Ren.

Chris Woodman
Texas A&M Univ.
APS Education Committee

APS Online Professional Skills Training Course Update

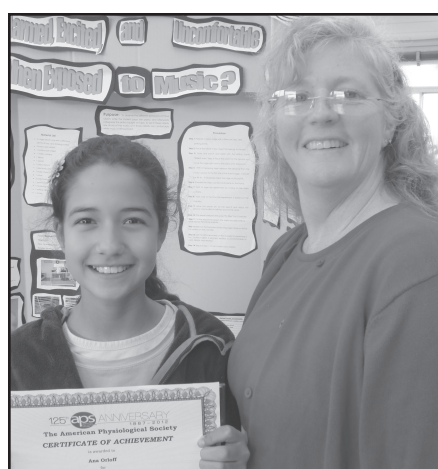
APS completed its second online Professional Skills Training Course on "Interviewing for an Academic Position." Seven graduate students, postdoctoral fellows, and early career professionals participated in the course in order to learn about the academic job search, the basics of preparing applica-

tion materials, preparing for and conducting a successful interview and job talk, and negotiation a job offer. APS members serving as instructors for the course were: Johanna Krontiris-Litowitz, Youngstown State Univ., and Thomas Pressley, Texas Tech Univ. Health Sciences Center.

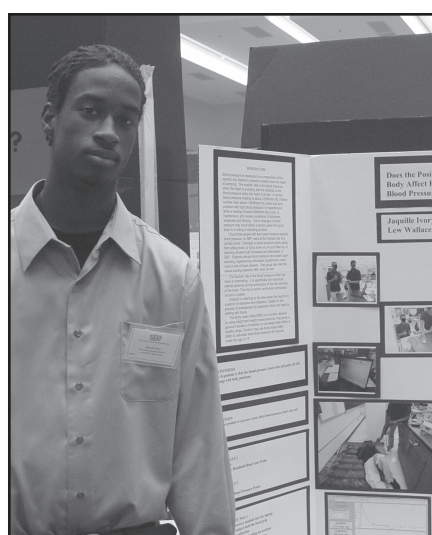
The next online course APS will be offering is "Interviewing for an Industry Position" in September 2012. For more information, visit <http://www.the-aps.org/pst> or e-mail education@the-aps.org. ♦

APS 2012 Science Fairs

Science Fair Awardee & Project Title	Teacher	Grade Level	Science Fair	APS Member Judge
JaQuill Ivory Does the Position of a Person's body affect heart rate, pulse and blood pressure?	unknown	10th-12th	Calumet Regional Sci. Fair	Nancy Mangini
Nick Coyle Acid vs. Alkalai: which is healthier and why?	unknown	7th-8th	Northeastern Ohio Science and Engineering Fair	Cassandra Talerico
Kuang-Ming Shang & Tzu-Hsuan Su Novel Bioactivities and Mechanistic Insights of the Medicinal Fungus <i>Antrodia cinnamomea</i> against Human Breast Cancer Cells	Tsui-Hua Liu & Yu-Che Wu	12th & 11th	Pittsburgh Regional Science & Engineering Fair	Yuanpu Peter Di
Arthur Schweitzer The Effects of Pool Chlorine on Lung Exertion in Adolescent Swimmers	Gregory Kahoe		Alaska Science fair	Barbara Taylor
Cheyenne Parker To Dry or Not to Dry: A methodological study of BlackFooted Cat fecal enzyme immunoassays to determine pseudo v. real pregnancy	Pat Purkhiser, Jonathon T. Aaltonen	12th	2012 Nebraska Junior Academy of Sciences Fair	Barbara Engebretsen
Alexandra Walkush Positive Addictions	Gary Weier	12th	Wisconsin Physiology Fair	Joseph Covi
Gregory Piccirillo Using signals from the imagined articulation of whole words to control a brain computer interface	Sally Soulier	12th	St. Louis Science Fair	Chaya Gopalan
Ana Orloff Are Pet Rabbits Alarmed, Excited and Uncomfortable When Exposed to Music?	Kristie Miller		Mission Bay Montessori Academy	Alan Hargens



Ana Orloff pictured here with her teacher Kristie Miller was presented with an APS Science fair award by APS member Alan Hargens for her project "Are Pet Rabbits Alarmed, Excited and Uncomfortable when exposed to Music?"



JaQuill Ivory received an APS Science Fair award for his project "Does the Position of a Person's body affect heart rate, pulse and blood pressure?"



Gregory Piccirillo was presented with an APS Science Fair award for his project titled, "Using signals from the imagined articulation of whole words to control a brain computer interface."

APS Participates in 26th Annual HAPS Conference



Douglas R. Seals
Speaker for the conference was Douglas

APS was pleased to take part in this year's Human Anatomy and Physiology Society (HAPS) Conference, May 26-28, 2012 in Tulsa, OK. The APS-sponsored Update Seminar

R. Seals, PhD, Univ. of Colorado. Seal's seminar, entitled "You're Only as Old as Your Arteries: The Translational Physiology of Vascular Aging," tied well into the first annual HAPS Foundation Fun Run and was very well-received. Materials related to Seals' talk may be found in the APS Archive of Teaching Resources Featured Collections (<http://www.apsarchive.org/featured.cfm>).

APS also held a session on the APS Archive of Teaching Resources for attendees of the Cyberlearning in Community Colleges (C3) Pre-Conference Workshop, held by HAPS member Sam Donovan. APS staff member Miranda Byse, Archive Coordinator, spoke with workshop attendees about the new tools and communities available to Archive users. ❖

Mentoring Forum

Social Media for the Physiologist – A Modern Utopia or a Brave New World?

by Dr. Isis with contributions from Danielle Lee, Pascale Lane, and Kristy Meyer



"Dr. Isis"

The term "social media" refers to online tools that allow users to connect with others, form communities, and share information and content. The scientist

members of the American Physiological Society (APS) have a rich history of community building, science outreach, and public engagement. However, near ubiquitous Internet access, advances in handheld devices, and online social networking applications have dramatically expanded the opportunities for scientists to move beyond more traditional networking approaches and use social media to engage each other and the public.

At this past year's Experimental Biology meeting in San Diego I had the pleasure of participating in a symposium titled "Using Social Media to Communicate About Science and You." Chaired by Jim Hicks of the APS Communications Committee, this session featured scientist bloggers and communicators at different career levels with very different writing and communication styles. I also attended the Trainee Advisory Committee symposium titled "E-media Tools for the Professional Scientist" and found that discussion turned again to using social media and online networking. During

my participation in these sessions, a few things became very clear to me. Many physiologists are already using social media as part of their daily life, even if they don't recognize that they are doing it. Some physiologists want to engage in social media but feel uneasiness about where to begin and some are unsure as to how social media can be used to enhance their research and career.

So, the question remains, how does one use social media to network and talk about science? To help many of my fellow physiologists move from being total n00bs (that's web lingo for someone who is brand new) to being total rockstarz, I have asked the symposia participants to share some tricks, tips, and bits of wisdom for using social media to talk about science.

Tip 1: Be the master of your online presence. One of the first things I do when I first hear or read a new name is turn to Google. When you search for your own name, what do you find on the first page of results? A well-designed lab web site? Links to pictures from your fraternity days in the 80's? Nothing? By knowing what is out there—the good, bad, ugly, and inaccurate—you have a better chance of knowing what others will see when they search for you. Potential employers, mentors, and collaborators are using Google, so stay ahead of them. Manage your privacy settings properly and contact individuals who may post things without your approval.

Tip 2: Claim your professional cyber real estate. Because potential employers and faculty are turning to Google to learn more about potential

employees/students, you want to give them something good, but more importantly relevant, to find. Sign up for a personal webpage at About.me (<https://about.me/>) and LinkedIn (<http://www.linkedin.com>). About.me is a personal webpage where you can quickly introduce yourself and your talents to the world. If you have a blog or have been quoted by the media you can include relevant links for people to follow. Be in control of the message. LinkedIn is a professional networking hub. You can post your CV and get recommendations to establish yourself as

The blogger known as Dr. Isis has some fancy-sounding degrees and is a physiologist at a major research university working on some terribly impressive stuff. She blogs about balancing her research career with the demands of raising small children, how to succeed as a woman in academia, and anything else she finds interesting. She blogs at <http://isisthescientist.com> and can be reached at isisthescientist@gmail.com. Danielle Lee is a hip hop maven and postdoctoral researcher at Oklahoma State Univ. She blogs at The Urban Scientist (<http://blogs.scientificamerican.com/urban-scientist>). Pascale Lane is Professor of Pediatric Nephrology & Associate Dean for Faculty Development at Oklahoma Univ. Health Sciences Center. She blogs at WhizBANG! (<http://scientopia.org/blogs/whizbang>). Kristy Meyer is the Social Media/New Media Director at 2eCreative. Find her at <http://www.linkedin.com/in/kristymeyer>.

an expert and connect with potential employers, mentors, and collaborators.

Tip 3: Pick a community you like and start participating. Twitter is easiest to start with. Consider following the hash tag #scio13 (ScienceOnline). Made up of scientists, journalists, and other science communicators, these folks love to gab about science. I also maintain a feed of APS members on that I find on Twitter. You can find it at <https://twitter.com/#!/drisis/apstweeple>. Send me a quick tweet @drisis and I will gladly add you to the list. LinkedIn is best for making professional contacts. Tumblr (<https://www.tumblr.com/>) is good for free form. Facebook (<http://www.facebook.com/>) is great for starting your personal network with friends and family. Quora (<http://www.quora.com/>) is also great as a starting point. Remember that it's more fun to talk about science when you have an audience. This segues nicely into the next tip.

Tip 4: Decide on some goals and know whose attention you want to attract. Maybe, like me, you're just looking to talk about science and occasionally crack wise. Maybe you're looking for a mentor, you want to find new collaborators, or do outreach. Maybe you have a cause you want to promote. Deciding what information you want to share will help you decide how to share

that information.

Tip 5: Make using social media part of everyone's job. Tara Smith from the Univ. of Iowa routinely shares guest posts from her students on her blog (see <http://bit.ly/KVSGRq> to view them). They are fantastic. Consider engaging lab members to help revamp the lab's website or follow Twitter feeds for funding announcements and exciting new research. The NIH, many major publications, and many professional organizations publish information to Twitter. The Drugmonkey blog (<http://scientopia.org/blogs/drugmonkey>) is a great place to chat about grantsmanship and professional development and is written by an NIH-funded scientist. Consider sending your trainees there to wade through the archives.

Tip 6: Use social media to set the agenda. Scientists working to counteract "animal rights" extremism have been highly effective in using social media. Consider checking out the Speaking of Research and Americans for Medical Progress Twitter feeds (@speakingofresearch and @medicalprogress, respectively) and blogs. If you have your own cause that you are passionate about, social media is a potentially powerful tool and the more voices, the louder the message.

Tip 7: Use social media to reach new

audiences. In the four years I have been writing my blog, I have been frequently surprised by what attracts attention. One of the most popular posts I have written was a quick rant about a morning when everything seemed to be going wrong for me. I had spilled coffee on myself, I was running late, and, to top it all off, I accidentally buckled my preschool son's boy parts into his car seat in a rush to get him to day care. Although my intent was to simply share a funny story, I received many notes from other women scientists about how my post made them feel better about their own chaotic mornings. You may be pleasantly surprised by who your writing resonates with.

But, probably the most important tip is one that is applicable to any skill we seek to develop as scientists. The more you do it, the better you'll get at it. The better you get at it, the more you'll enjoy it. The biggest hurdle is making that first connection, but there are plenty of friendly voices out there. Consider starting by heading over to Twitter and saying hello to APS's Executive Director Marty Frank (@execdirectoraps). From there, the Internet's the limit.

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

CALL FOR NOMINATIONS

For the Editorship of the

American Journal of Physiology–Renal Physiology

ajprenal.org

Nominations are invited for the Editorship of *AJP-Renal Physiology* to succeed T. Kleyman, who will complete his term as Editor on June 30, 2013. The APS Publications Committee plans to interview candidates in the Fall of 2012.

Applications should be received before **August 15, 2012**.

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

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

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

The following articles summarize presentations given as part of a symposium entitled National Institutes of Health: Programs and Policies Updates from the Institutes at the 2012 Experimental Biology meeting. Additional articles based upon symposium talks will be published in the October issue.

National Heart, Lung, and Blood Institute: Signature Programs and Strategy, 2012

April 24, 2012, San Diego CA

Susan B. Shurin, MD, Acting
Director, NHLBI

A Case Study

Although cardiovascular disease (myocardial infarction, heart failure and stroke) remains the leading cause of death in the US, over the past 60 years, the age-adjusted rate of cardiovascular death has fallen dramatically. (Figure) How did this happen? The National Heart, Lung, and Blood Institute (NHLBI) at the National Institutes of Health (NIH) in Bethesda, MD, has been actively involved in multiple aspects of these trends and attempts to incorporate some of the lessons of the successes of these programs as it makes investment decisions now. Cohort studies identified high blood pressure and high serum cholesterol as factors which correlated with risk of future. Intensified research efforts elucidated the physiology of lipid metabolism and control of blood pressure, leading to several Nobel Prizes and to development by private industry of statins to lower LDL cholesterol and antihypertensive agents. Implementation of dietary changes and effective drugs to lower cholesterol and blood pressure, aspirin, and smoking cessation programs all reduced the number of heart attacks. New treatments after heart attacks, including lifestyle and medical therapies, stents, bypass surgery, and drugs to prevent and break down blood clots improved the outcome in those who developed disease. Changes in behavior, medical practice, and public health measures, such as taxes on tobacco products and bans on indoor smoking, have all had an impact.

What have we learned from our successes and failures?

1. A broad portfolio of research approaches is essential to advancing

health. Epidemiology helps us identify the most fruitful avenues of exploration. We make no progress at all without basic scientific knowledge. Understanding the physiology of whole organisms was essential to targeting cellular and molecular studies which elucidated mechanisms. Early investigators focused on heart disease may not have thought that they would be modulating processes in the kidney to control blood pressure and in the liver to control cholesterol. Knowing the overwhelming importance of these factors in humans focused the attention of basic scientists. The development of effective therapies was, in turn, entirely dependent upon an understanding of the processes which control the development of risk factors for disease. Multiple disciplines and investigators are essential to advancing science.

2. Working in partnership with industry is extremely productive. The scientific and business acumen which they bring to the process of developing and marketing drugs is essential to moving the science to the people who will benefit from the knowledge gained in the laboratories we support.

3. Effective implementation requires a multipronged approach of education of the public and caregivers, integration of guidelines into health care delivery, and other approaches to translate evidence into action.

How does this impact what we are doing now?

We are now living with very constrained resources. The NIH budget has been flat since 2003, and we are now funding research at the level of inflation-adjusted dollars at which we were funding it 11 years ago in 2001. This is occurring as we have unprecedented scientific opportunities – we have never had more exciting leads to follow than we have in 2012. We have a flood of genomic and molecular information about the function of cells, tissues and organisms; we have tools to image and measure at subcellular and systems levels, and we have computational power beyond the wildest dreams of our predecessors.

While our resources are limited, they are not trivial. The NIH has a \$30.6 billion budget in FY 2012, and the NHLBI

has budget of \$3.1 billion. Thus, we must be wise and use good judgment in investing these public funds. Building on what we have learned from what has, and has not, worked in the past, we have several guiding principles.

- We manage our resources as carefully as possible. We closely monitor the progress of large investments, and make adjustments as needed. At the same time, we try not to interfere in science which is exploratory and whose outcome is not foreseeable.

- We try to provide the resources needed for investigators to do the work. We do not make across the board cuts in grants, but look carefully at alignment of budget to proposed scope of work and fund accordingly.

- We maintain support for training and new investigators. This is our future, and we continue to ensure that the young eat first.

- Partner wherever possible. We have found that our investments often attract investments by others, but this happens only if we ask. We are constantly looking for ways to enhance our effectiveness.

- Identify and support signature areas of research to exploit and focus unique scientific opportunities. The current signature areas at the NHLBI are:

- Discovery research in genomics, systems biology and computational modeling. The massive amount of genomic and other “-omic” data must be translated into an understanding of biological process. The NHLBI has supported genome-wide association studies of its long-term cohort populations, and whole exome sequencing of subgroups of those studies. The genomic and phenotypic data are widely available to researchers through db GaP (<http://www.ncbi.nlm.nih.gov/gap>), and we encourage investigators to mine these data to move their work forward rapidly.

- Regenerative medicine. Many of the processes leading to heart, lung and blood disease come from scarring and necrosis of tissues in damaged organs. We support work exploiting recent findings in stem cell biology and tissue engineering to restore function and build new organs.

- Translational research. The NHLBI continues to support all phases of translational research to ensure that

our major investment in basic science achieves its goal of advancing health.

Conclusions

The excitement of opportunities in biomedical research has never been greater. The difficulties of maintaining a scientific career are very challenging, but this has never been an easy career choice. The NHLBI is honored to support a broad portfolio of research ranging across a broad spectrum of fundamental molecular biology, cell biology, physiology, systems biology, all stages of research translation, and epidemiology. We are eager to work with investigators to get the best science supported and achieve our common goals.

NIH Peer Review: Where Are We and Where Are We Going?

Richard Nakamura
Acting Director
Center for Scientific Review
National Institutes of Health

Key Role for NIH Peer Review

NIH peer review continues to play a key role in helping NIH identify and advance cutting-edge research. The NIH Center for Scientific Review (CSR) is the gateway for all NIH grant applications and the nexus for most of the peer reviews to assess their scientific merit. CSR is a separate part of NIH that works to ensure NIH grant applications receive fair, independent, expert, and timely reviews — free from inappropriate influences — so NIH can fund the most promising research. Last year, we received 85,000 grant applications and reviewed 58,000 applications in nearly 1,500 review meetings, which involved 16,000 reviewers.

The other NIH Institutes and Centers (ICs) manage the remaining peer reviews to evaluate the merit of IC-specific applications, such as those for large center grants and those submitted in response to requests for applications. The ICs also manage a second level of review for all NIH grant applications. Their advisory councils make funding recommendations after considering how well the applications meet IC funding priorities and public health needs. The IC Directors make

the final funding decision.

Despite budget constraints, the National Institutes remains the largest single source of biomedical research funds in the world, with an annual budget of about \$31 billion. Eighty-three percent is distributed to scientists in the extramural world through 24 of NIH's 27 Institutes and Centers. NIH currently supports more than 325,000 scientists and research personnel at over 3,000 institutions.

Since the NIH grant success rates fell to 20% last year soon after enhancements to the NIH peer review and grants systems, some applicants have blamed these enhancements. But most of the problems are caused by the historically low success rates, and the often proposed solutions will not work so long as success rates are as low as they are.

The Elimination of the A2 Application: Whatever you think about this policy, it has reached the goal of the internal and external advisory groups that proposed it. Doing away with an applicant's ability to resubmit an unfunded application a second time has significantly reduced the time to award. Since this policy was put in place, the average time to award has been reduced by over 20 weeks.

Deteriorating paylines, however, have made this policy difficult for some to bear. The NIH Office of Extramural Research has surveyed stakeholders on this policy, and results are expected in November 2012. In the meantime, CSR recently published an article to help applicants move forward after an unsuccessful A1 application.

- **Improving the Alignment of CSR Study Sections:** One of our important priorities and biggest challenges is keeping our review groups aligned and prepared for the future as science evolves. To do this, we seek input from the community, NIH/CSR staff and our Advisory Council. We also systematically review each of our Integrated Review Groups of study sections every two years. In addition, we are exploring the use of bibliometric and text evaluation methods to see how our network of study sections compare to the network of science.

- **Advancing Electronic Review Platforms:** CSR has developed a number of electronic review platforms to help recruit reviewers who find it diffi-

cult or impossible to travel to review meetings: internet, video, and telepresence assisted meetings. Given the lower costs of these meetings and fiscal pressures, CSR will host more electronic reviews this year, reviewing applications well suited for electronic reviews: fellowship, small business and shared instrument (S10) applications. To ensure quality, we are committed to comparing electronic and face-to-face meetings.

- **Recruiting Reviewers:** Since our reviews are only as good as our reviewers, we are always looking for good scientists to serve and encouraging them to consider the benefits: <http://public.csr.nih.gov/ReviewerResources/>. Serving is a great way to keep up with how an exceptional application is put together and to get to know experts in areas of science related to yours. Chartered study section members and others with equivalent service, may submit at any time R01, R21 and R34 grant applications that would otherwise have standard due dates. And finally, serving is a way for grantees to give back to the community.
- **Focusing More on Impact and Significance:** This was a major emphasis of the recent enhancing peer review initiative. Though some question the success of this effort and reviewers often struggle with how to score impact and significance, reviewers are indeed paying more attention to these important assessments.

- **Using the 1-9 Scale to Score Applications:** The good news is that scoring is more linear than it was before this change. The low success rates, however, has meant that the scoring range for fundable applications is very narrow, and there is an anomaly where scores are bunching a little at the 2 level. It would be helpful to have more scoring information in that range. The NIH Office of Extramural Research is looking at this issue.

Review and Funding of New Investigator Applications

Despite what many expect, NIH has markedly increased support for new and early stage investigators. The proportion of new investigators increased to about 30% of all competing R01 grant applications in 2010 from a low of about 23% in 2006. This rising investment is due to the commitment NIH made to fund an appropriate number of

new and early stage investigators. To help ensure R01 grant applications submitted by these vulnerable applicants are reviewed fairly, we cluster their reviews in our study sections and encourage reviewers to consider the applicants' career stage when scoring.

CSR's Early Career Reviewer Program

Last year, CSR launched an Early Career Reviewer (ECR) Program to train the reviewers of the future, to help emerging researchers advance by exposing them to review experience, and to enhance and diversify our pool of reviewers. ECRs serve up to once a year for two years as the third reviewer on a limited number of applications. All qualified researchers are encouraged to apply, and our Scientific Review Officers recruit ECRs when they have the appropriate expertise: <http://www.csr.nih.gov/ecr>.

Goals for the Future

Looking Ahead, CSR Is Working to:

- Enhance the distribution of applications across study sections.
- Better anticipate the evolving science our study sections must cover.
- Develop better tools for applicants to request study sections.
- Develop better tools for finding reviewers.

Working to Increase Diversity and Reduce Award Disparities: A recent article in *Science* revealed some unsettling data showing NIH award disparities among underrepresented minorities. We hope CSR's ECR will help address this situation. NIH Advisory Committees to the NIH Director are currently working to better understand and address award disparities.

Developing a Science of Peer Review: Decisions about future changes should be driven by careful consideration of sound data. CSR is actively seeking new analytical tools and collaborations with external experts who can help us get such data. We will also seek broad input from the scientific and the NIH communities. Future enhancements need to be responsive to the concerns of those we serve. (http://grants.nih.gov/grants/peer/continuous_review.htm).

"Moving Forward After an Unsuccessful A1 Application," Peer

Review Notes, May 2012, Center for Scientific Review, www.csr.nih.gov/prn

"Race, Ethnicity, and NIH Research Awards," Donna K. Ginther, Walter T. Schaffer, Joshua Schnell, Beth Masimore, Faye Liu, Laurel L. Haak, and Raynard Kington, *Science* 19 August 2011: 1015-1019. (<http://acd.od.nih.gov/dbrroster.htm>).

Investing in the Future: NIGMS Strategic Plan for Biomedical and Behavioral Research Training

Judith H. Greenberg, PhD
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The National Institute of General Medical Sciences (<http://www.nigms.nih.gov/>) (NIGMS), the fourth largest institute of the National Institutes of Health (NIH), has had a long-standing commitment to research training. NIGMS, through its Ruth L. Kirschstein National Research Award (NRSA) predoctoral training grants (T32s), supports nearly half of all NIH-supported predoctoral trainees. The institute also supports undergraduates and postdoctoral scholars through a variety of grant mechanisms. In addition, its regular research grants (R01s) fund at least 1,000 predocs and postdocs in a given year.

In 2009, at the request of its then-director Jeremy Berg, NIGMS began a year-long examination of all its training activities to be sure that they are "aligned with our commitment to build an excellent, diverse research workforce to help achieve the NIH mission, now and in the long term." In embarking on this process, NIGMS recognized several realities: 1) that NIGMS is only one of many funders of research training in the US; 2) that research grants are the most common NIH support mechanism for graduate students and postdocs; 3) that many different career outcomes contribute to the NIH mission; 4) that the time to scientific independence is longer than it has ever been; and 5) that the US biomedical research workforce does not reflect the

diversity of the US population.

NIGMS solicited broad input about training from university and college faculty and administrators, current and former postdocs and graduate students, industry representatives, representatives of professional and scientific organizations, and other interested parties through a Web site, four regional meetings, and a webinar. Based on comments from over 250 stakeholders and extensive discussion by the staff of NIGMS, the institute developed Investing in the Future: NIGMS Strategic Plan for Biomedical and Behavioral Research Training (<http://publications.nigms.nih.gov/trainingstrategicplan/>) and released it in January 2011.

The strategic plan identified four themes that, in the aggregate, describe NIGMS' training philosophy:

- Research training is a responsibility shared by NIH, academic institutions, faculty, and trainees.
- Research training focuses on student development, not simply selection of talent.
- Breadth and flexibility enable research training to keep pace with opportunities and demands of contemporary science and provide the foundation for a variety of career paths.
- Diversity is an indispensable component of research training excellence, to be advanced across entire research enterprise.

The importance of excellent training and mentorship is a thread that runs through the strategic plan. In this regard, it encourages faculty to have training plans for their students and strongly suggests that all graduate students and postdocs establish individual development plans. It also encourages institutions and faculty to identify and adopt evidence-based practices so that students receive the mentorship necessary to develop essential career skills. Another thread is the value of diversity in all its dimensions, not only in recruitment and retention of a diverse pool of students, but also in inclusion of various perspectives, backgrounds, and approaches among faculty and trainees.

The strategic plan also breaks new ground. For example, it acknowledges that graduate students and postdocs are "trainees" not only if they are supported by NSRA institutional training grants, but also if they are supported by R01s and other grant mechanisms—and that they should receive the same

high-quality training and mentorship regardless of the source of support. The plan also recognizes that students may follow many different career paths, not just a research career in academia, and should, therefore, be exposed to different options. Collaboration with scientific societies is viewed as one means to accomplish this.

Over the course of the past year, NIGMS has been working to address the specific action items that fall within each theme. In February 2012, NIGMS posted on its Web site a Blueprint for Implementation (<http://www.nigms.nih.gov/Training/StrategicPlanImplementationBlueprint.htm>). The Blueprint

sets out NIGMS' expectations for what constitutes excellent training and for the societal benefits of a diverse workforce. NIGMS has also committed itself to examine how it allocates training slots and to monitor and evaluate all its training activities to continually improve outcomes.

Importantly, the Blueprint also reiterates the theme that research training is a partnership between NIH and the academic community. Although NIGMS believes that most of the training it supports is of high quality, the Blueprint has as one premise that there is always room for improvement. To this end, NIGMS' Web site provides sources of information to assist all fac-

ulty and institutional leaders to reach high levels of excellence in training <http://www.nigms.nih.gov/Training/OptimizingtheResearchTrainingPartnership.htm>.

In an ideal training environment, students and postdocs from diverse backgrounds, supported by all grant mechanisms, will receive the outstanding training and mentorship that will enable them to enter many different careers in the biomedical workforce. NIGMS believes that its strategic plan will help define that environment. ❖

Update on FY 2013 Funding

As summer arrived, a bitterly divided Congress continued its work on legislation to fund the federal government in FY 2013, including the research budgets of the National Institutes of Health (NIH), the National Science Foundation (NSF), NASA and VA medical and prosthetic research.

NIH

Senate appropriators have recommended a budget of \$30.723 billion for the NIH in FY 2013, an increase of \$100 million (0.3%) over the FY 2012 level. The legislation specifies an additional \$54.89 million for the National Center for Advancing Translational Sciences, of which \$30 million will go to the Cures Acceleration Network.

As of this writing, the House of Representatives has not yet considered next year's budget for the NIH.

NSF

Under the bill the drafted by House appropriators, the NSF would receive \$7.332 billion in FY 2013, an increase of \$302 million (4.3%) over FY 2012. Appropriators for the Senate came in slightly lower, recommending an allocation of \$7.273 billion, \$240 million (3.5%) over FY 2012.

VA

Both House and Senate appropriators have recommended \$582.7 million for medical and prosthetic research at the VA. This represents a \$1.7 million increase (0.3%) over FY 2012.

NASA

House appropriators have recommended that NASA be funded at \$17.574 billion in FY 2012, which represents a cut of \$196 million (-1.1%)

below FY 2012. Senate appropriators allocated significantly more, recommending a budget of \$19.4 billion, but this includes \$1.6 billion for NOAA weather satellites that was not in the House bill.

With the election looming in the fall, it is unlikely that appropriations legislation will be completed and signed into law before the start of the new fiscal year. A series of continuing resolutions will likely fund federal programs until after the elections, and possibly into the New Year. This extended process has occurred so often that it is no longer novel. However, this year many government spending programs face the additional threat of mandatory cuts known as sequestration unless Congress makes steep cuts in the budget or reverses the Budget Control Act agreement reached last summer. ❖

Stand Up for Science!

We Support Scientists By:

- Advocating for funding for biological research
- Advancing policies that facilitate research and reduce regulatory burden
- Improving the environment for science training and education

FASEB, the voice of biomedical researchers, represents 26 scientific societies and over 100,000 scientists and engineers.

Join our e-Action Alert

Help us communicate with Congress on key research issues and keep up with the latest policy news by joining our e-Action Alert list:

www.faseb.org/StandUp

Join APS

Benefits include reduced fees for scientific meetings, conferences, and journals; access to continuing education, professional development and career resources including awards and fellowships; involvement in committees/sections and groups; and opportunities to contribute to science policy, advocacy, and public education.

www.the-aps.org

Public Outreach—A Toolkit for Investigators

The APS Animal Care and Experimentation (ACE) Committee sponsored a symposium on Public Outreach at the Experimental Biology 2012 meeting in San Diego. Speakers included vision researcher Dario Ringach of UCLA's Jules Stein Eye Institute; laboratory animal veterinarian John D. Young of the Cedars-Sinai Medical Center in Los Angeles; and media relations expert Jim Newman of the Oregon Health and Science Univ. ACE Committee Chair Bill Yates chaired the session, which was entitled "Public Outreach and Animal Research: A Toolkit for Investigators."

Yates underscored the urgency of public outreach. He noted that animal rights groups have built mainstream support and that their pressure campaigns have an impact on research. We have seen a decline in public support for animal research, and if we are to reverse this trend, scientists must become more forthcoming in addressing public concerns about both the value of the research itself and the care provided to animals.

Ringach provided a scientist's perspective on engaging the public about animal research. He began by acknowledging that a major obstacle to outreach is the fact that "there are some really nasty people out there." (Ringach has experienced home demonstrations and personal threats, as well as threats against his family.) Nevertheless, according to Ringach, the decline in public support is a more serious threat than that posed by extremists. A 2009 poll by the Pew Research Center found that only 52% of the public supports animals in scientific research even

though 93% of the scientists polled support it. This raises the obvious question, why is public support so low? Ringach believes that the primary problem is the failure of the scientific community to tell the public and policy makers "what our work is about, why it is important, the care that goes in the work, the passion we feel about it."

Engagement with the public should be a shared responsibility, according to Ringach. Scientists should speak up when science is attacked, while veterinarians and animal care staff should explain care and compliance issues. Ringach acknowledged that some institutional administrators do not want scientists, veterinarians, or care staff to speak out, and some do not believe that the news media should be allowed into the animal facility so the public can see what actually happens. He noted that "some people oppose research because of things that happen only in their imaginations" based upon images that appear to show animals suffering or photographs taken many years ago. Moreover, if the media are not allowed to visit animal facilities, they will believe the worst. All in all, he believes that opening the doors and increasing transparency will provide a net gain. Scientists need to work within their institutions toward the adoption of policies that increase transparency. Achieving that goal may require many intermediate steps to address various concerns. For example, scientists unaccustomed to speaking to the media and the public might need communications training.

Ringach emphasized that members of the public have valid ethical con-

cerns so it is important to offer both scientific and ethical justifications for research. Even where there are disagreements of opinion, these are issues that researchers can and should discuss. Legitimate ethical concerns about the harm caused to animals still have to be balanced with the scientific importance of the work and what society stands to lose if the research were stopped. It is also important to develop authoritative resources about research, such as a new website, www.brainfacts.org, that was to go live in May. Ringach urged scientists to provide the lay public with explanations and descriptions of research that do not contain exaggeration or false hopes. At the same time, patients and families should be encouraged to share their experiences with the suffering caused by disease so the public can "put human suffering in the balance with animal suffering."

Laboratory Animal Veterinarian John D. Young discussed his experience with public outreach over the past quarter of a century. In addition to his role as Director of Comparative Medicine at the Cedars-Sinai Medical Center, Young is also the chairman of the board of the advocacy group Americans for Medical Progress (AMP). He explained that his philosophy is counter animal rights propaganda by taking advantage of daily opportunities to tell people what you do with animals, and why you do it. He contrasted six "anti-research lies" with three "simple truths" about animal research. The lies include that research is always cruel and painful; that researchers don't care about the well-being of animals; that animal research doesn't produce cures because animals are not people; that research is unnecessary because most diseases are preventable; that alternatives are available; and that research diverts funds from patient care. Both AMP and APS have material on their web sites to help research advocates address these points. AMP's FAQ is available at <http://www.amprogress.org/AnimalResearchFAQ>, while the APS has an FAQ for the general public at <http://www.animalresearchcures.org/advocacytalkingpoints.htm>.

The three simple truths Young offers



Jim Newman, Dario Ringach, and John Young respond to questions at the ACE Committee's public outreach symposium at EB 2012 in San Diego.

are that animal research was vital in the past; that it will continue to be vital for foreseeable future; and that without animal research, medical progress will slow, stop, and reverse. Young said that he tries to respond to every letter and phone call raising questions about research at Cedars-Sinai. He also undertakes outreach to the staff within the medical center. He believes it is important to put a face on medical research using animals.

Jim Newman provided a media relations perspective on why investigators and institutions should talk about animal research. Newman, who is the Associate Director for Media Relations in the Oregon Health & Science Univ. (OHSU) Office of Strategic Communications, said that while many people are concerned that if they speak out they will become a target of animal rights activists, the opposite turns out to be the case: activists are least likely to pursue those who speak out and respond to allegations made about them.

Newman emphasized the importance of ensuring that the facility adminis-

tration supports openness about its research. For that reason, it is important to bring the Vice President for Public Relations into the animal facility. It is also important for research facilities to reach out to their own employees.

Newman takes a pro-active stance by announcing the findings of every USDA inspection and every AAALAC site visit. He posts every USDA inspection report even if the institution was written up for an infraction. When this occurs, he also includes an explanation about how strict animal welfare oversight laws are. There is always a risk with an open door policy, but the media recognizes and appreciates the openness. Newman recommended that every research institution make sure its communications office is ready for a crisis and knows how it will respond. His philosophy is never to decline an interview request, to release documentation to back up statements made to the press, to monitor state and federal records requests, and to be ready to respond to what has been released.

OHSU was the subject of PETA hidden camera investigations in 2000 and 2007. The two incidents produced completely different outcomes in terms of media coverage and morale within the institution. The 2000 infiltration led to months of challenging press coverage, protests, community distrust, and low morale among staff. OHSU subsequently hired a dedicated press person for the primate research center and undertook a variety of steps, including crisis planning, outreach to the public and legislators, and developing closer ties with local law enforcement. When the 2007 infiltration came to light, OHSU responded immediately by holding its own press conference, allowing the media on site, releasing documents and video, and providing information to students and staff. As a result, the press coverage was generally quite balanced, the story came and went very quickly, and scientists at OHSU felt that the institution was standing behind them. ❖

APS-AAAS Mass Media Fellow

A Scientist's Defining Summer

Since 1999, the APS has sponsored one individual for the AAAS Mass Media Fellowship. Our 2011 Fellow, Kelly Hogan, PhD, recounts her experience working as a reporter at the Milwaukee Journal Sentinel, below. The program is designed to enhance coverage of science-related issues in the media in order to improve public understanding and appreciation of science and technology. Fellows have the opportunity to observe and participate in the process by which events and ideas become news, improve their communication skills by learning to describe complex technical subjects in a manner understandable to the lay public, and increase their understanding of editorial decision making and the way in which information is effectively disseminated. Interested in the program? Log on to <http://www.aaas.org/programs/education/MassMedia/program.shtml> to learn more.



Kelly Hogan

It was an unlikely place for a toxicologist-in-training to find herself. But

there I was, among a select group of Milwaukee Journal Sentinel health reporters and editors poised to meet with the city's mayor. The morning agenda: to discuss strategies for covering the city's infant mortality problem.

There was an irony about our meet-

ing place, a history-steeped room in the downtown Journal Communications Building named for Agnes and Lucius Nieman. The Niemans were an unlikely coupling of a Milwaukee socialite and a Chicago newsman. Unlike Agnes who enjoyed life among Milwaukee's upper crust, her husband Lucius overcame an impoverished childhood to become editor and eventually owner of Milwaukee's largest newspaper. To me, the Niemans' story typifies Milwaukee: a beautiful lake-side city with a rich history, a heartbreaking back story, but a will to overcome hardship.

At the heart of Milwaukee's particular back story: babies in certain parts of the city were failing to live beyond infancy, instead dying in neglected inner city neighborhoods just miles from affluent suburbs. In recent years, the number of infant deaths in Milwaukee had become too staggering to ignore. In certain zip codes within the city, death within the first year of life rivaled the infant mortality rate of

Botswana. The worst rates of infant death—11 infant deaths/1,000 live births—were observed from 2005-2008. In one downtown zip code, the rate was 19.5 deaths/1,000 live births. Milwaukee babies of African American descent were dying disproportionately—15.7 deaths/1,000 live births—which was over twice the infant mortality rate among Milwaukee's Caucasian population. The reasons for these astounding statistics are as complex as Milwaukee itself, a highly segregated city with an especially high unemployment rate. Poverty, poor healthcare, psychosocial stress, and co-sleeping contribute to the city's high infant mortality.

In 2011, *Journal Sentinel* editors knew that their reporters had the power to help turn these statistics around. Perhaps inspired by the Niemans' edict to elevate journalism by "telling the news fully and truthfully," *Journal Sentinel* reporters told the story of infant mortality in Milwaukee through a series of articles collectively called "Empty Cradles" (<http://www.jsonline.com/news/119882229.html>).

The "Empty Cradles" series was an intriguing opportunity outside the context of the lab to interview clinician scientists and dig deeply into clinical literature. My objective was to give researchers an opportunity to use their data to weigh in on the city's vexing problem of infant mortality. For the series, I did what I believe I did best at the newspaper that summer: I told the stories of researchers on the front lines of fetal and maternal health. My first "Empty Cradles" piece reported on research in primates, which demonstrates that even a modest decrease of nutritional food may predispose a fetus to adult onset disease (<http://www.jsonline.com/features/health/124574774.html>). Another article I wrote took a local approach and reported what Milwaukee-based basic and translational research is revealing about genetic susceptibilities in preterm infants or toxicant-exposed fetuses (<http://www.jsonline.com/features/health/127784268.html>). By writing about research, I discovered the many ways bench science is translated to bedside application. What I didn't expect was the extent to which the AAAS Mass Media Fellowship would reignite the passion for research that I had misplaced somewhere along the way to earning a PhD.

My assignment as an AAAS Mass Media Fellow came at a difficult crossroad in graduate school. Just weeks before arriving to Milwaukee, I had been in the throes of my dissertation research. As research often does, mine was spinning in what seemed at the time a series of less-than-meaningful concentric circles. Although grateful for access to an array of mouse models during my graduate studies, my work in rodents was offering little of what I craved most: research translation. Unlike many Mass Media Fellows who aspire to transition from science to journalism, I hung tightly to the notion that I would remain in science, but I badly needed the perspective only a summer spent away from the lab could provide. The AAAS Mass Media fellowship gave me time and space to consider the direction my research trajectory would take.

After the summer I returned to the lab eager to tell the story of my own research. That fall I defended my dissertation. As I searched for postdoctoral positions, I looked for ways to apply my basic science training to clinical or population level problems. My experience as an AAAS Mass Media Fellow was one of many inspirations to pursue postdoctoral research that seeks to identify a biological link between chemical exposures and preterm birth. How profoundly a summer "on the loose" can

shape a path in science.

In many respects, the summer I spent in Milwaukee defined the type of scientist I have become. I welcome opportunities to connect with both journalists and lay audiences and see collaboration and engagement with colleagues, clinicians, healthcare workers, and stakeholders as an integral and important part of any scientist's job description. My summer spent in the newsroom serves as a reminder to reach out beyond the lab in some small way. Indeed, the AAAS Mass Media Fellowship not only grooms the next generation of science communicators, it fosters more engaged scientists.

Kelly Hogan, PhD, MS, MES is a Postdoctoral Fellow in Environmental Toxicology in the Department of Environmental Health Sciences at the Univ. of Michigan School of Public Health. Dr. Hogan is a member of the National Association of Science Writers and frequently tweets about toxicology...with a reproductive health twist (@Loose_Lab_Rat). ❖

Bowditch Lectureship Nominations

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

Nominations will now only be accepted via online submission. Please go to <http://www.the-aps.org/awardapps> to submit your nomination. **Nomination deadline:** October 1.

Sir Andrew Fielding Huxley (1917–2012)

Andrew Huxley, a British physiologist who shared the 1963 Nobel Prize with two other scientists for research on how nerve impulses are transmitted, died May 30 at age 94. Trinity College of Britain's Cambridge Univ., where Huxley spent much of his academic life, announced his death.

Huxley won the 1963 Nobel Prize in Physiology or Medicine for his experimental and mathematical work with Alan Hodgkin on the basis of nerve action potentials, the electrical impulses that enable the activity of an organism to be coordinated by a central nervous system. Hodgkin and Huxley shared the prize that year with John Eccles, who was cited for research on synapses. Hodgkin and Huxley's findings led the pair to hypothesize the existence of ion channels, which were isolated only decades later. Together with the Swiss



Sir Andrew Fielding Huxley

physiologist Robert Stämpfli he evidenced the existence of saltatory conduction in myelinated nerve fibers.

Huxley's later research explored electrical conductivity in muscles. Huxley also developed the mathematical equations for the operation of myosin "cross-bridges" that generate the sliding forces between actin and myosin filaments, an entirely new paradigm for understanding muscle contraction.

Huxley continued to hold college and university posts in Cambridge until 1960, when he became head of the Department of Physiology at University College London. In 1984, Huxley became master of Trinity College, Cambridge Univ. He was named a fellow in the Royal Society in 1955 and served as its president from 1980 to 1985. He was knighted in 1974. Huxley was elected to Honorary Membership in the American Physiological Society in 1981. ❖

People & Places

APS Members Elected to NAS

The National Academy of Sciences announced the election of 84 new members and 21 foreign associates from 15 countries in recognition of their distinguished and continuing achievements in original research. Of those elected, two of the new members are APS members. The Society congratulates Nancy Bonini, investigator, Howard Hughes Medical Institute, and Lucille B. Williams Professor of Biology department of biology, University of Pennsylvania, Philadelphia and Peter L. Strick, co-director, Center for the Neural Basis of Cognition, and professor, departments of neurobiology and psychiatry, Univ. of Pittsburgh, Pittsburgh on their election.

American Academy of Arts and Sciences Elects APS Members

The American Academy of Arts and Sciences announced the election of 220 new members, continuing a 230-plus year history of recognizing some of the world's most accomplished scholars, scientists, writers, artists, civic, corporate, and philanthropic leaders. Amongst the new members were two APS members. The Society congratulates Emery Neal Brown, Massachusetts Institute of technology, and Victor J. Dzau, Duke University, on their election.

Garami Selected for APS Perkins Memorial Award for International Physiologists

Andras Garami, Univ. of Pecs, has been selected as the 2012 spring awardee of the APS Perkins Memorial

Award for International Physiologists. Garami will be a visiting scientist in the lab of APS member Andrej A. Romanovsky, St. Joseph's Hospital and Medical Center. The Perkins award promotes cultural exchange and scientific collaborations by providing supplementary aid to families of foreign scientists working for a minimum of 3 months in the US.

James Melvin Anderson is currently Director of the Division of Program Coordination, Planning, and Strategic Initiatives at National Institutes of Health, Bethesda, MD. Previously, Anderson was at Univ. of North Carolina, Department Cell and Molecular Physiology, Chapel Hill, NC.

Ivan D. Frantz, is presently Clinical Professor of Pediatrics at Children's Hospital, Department Newborn Medicine Boston, MA. Prior to this position, Frantz was Assistant Professor of Pediatrics at Tufts Medical Center, Boston, MA. ❖

Letters to Terry Dwyer

Meyer Lifschitz writes: "Thank you for your recent letter concerning my 70th birthday. I believe that I have been a member of APS for almost 40 years. My first real job as an MD was on the faculty of the Univ. of Texas Health Science Center at San Antonio in the Division of Nephrology. For 30 years I was fortunate to be able to spend much of my time there involved with research, ranging from cell culture to studied in whole animals (rats, rabbits and dogs) to clinical studied in normal and ill humans. The setting was very supporting of research and fellows were readily available to assist with many of these projects. The NIH, VA and NASA provided support for most of this time. My last 19 years in Texas I also served as the Associate Chief of Staff for Research at the associated and physically connected Audie Murphy VA Hospital. That was a time of much growth in VA associated research in San Antonio and when I left the funds supporting research in the VA approached \$40 million making San Antonio one of the 10 most research intensive hospitals in the VA system.

"Nine years ago my wife Elizabeth and I moved to Jerusalem, Israel to be closer to our children, and their children, all who live here. I reoriented by day so that now I learn ancient Jewish texts (Talmud-Gemara) in the morning and do medicine in the afternoon and evening. Shaare Zedek Medical Center's adult Nephrology division has kindly taken me into their group and I continue to teach students, and participate in clinical research as I did in Texas and my clinical activities are mainly involved in an associated dialysis unit several evening a week. We are fortunate to have a supporting environment for clinical research and publish several original papers each year. A recent review of Aldosterone antagonism is scheduled to appear in *Kidney International* in March 2012.

"Seven years ago I donated my left kidney to my sister in Philadelphia who had developed End Stage Renal Disease over many years. For a Nephrologist to donate a kidney was, for me, a very unique and satisfying experience.

"My wife and I feel very fortunate to live in Jerusalem which is a wonderful

city for any Jewish person who wants to connect to their religious roots. Our children, and 22 grandchildren, are close by and I usually take each set of grandkids out for pizza once a week.

"Being an MD with research as a focus of major activity for virtually all of my career had made medicine always an exciting and stimulating endeavor. Assuming we are lucky enough to have our health, we plan on continuing our present activities for the future."

Ken Baldwin writes: "Thank you for contacting me regarding my 70th birthday. My how the time flies. I am in the process of retiring from the Department of Physiology & Biophysics at the School of Medicine at Univ. of California, Irvine. I have been at Irvine for 39 years. I will be recalled as an emeritus professor and will continue to teach medical students and stay engaged in research consultation with our exercise physiology research group that I helped to establish. I am still active in APS activities and currently serve as Councilor for the society." ❖

Current Calls for Papers

Physiological Genomics

Mitochondrial Metabolism

NextGen Sequencing Technology-Based Dissection of Physiological Systems

Technology Development for Physiological Genomics

American Journal of Physiology—Gastrointestinal and Liver Physiology

Physiology and GI Cancer

Intestinal Stem Cells in GI Physiology and Disease

Innovative and Emerging Technologies in GI Physiology and Disease

American Journal of Physiology--Heart and Circulatory Physiology

Mitochondria in Cardiovascular Physiology and Disease

(Submission deadline: December 31, 2012)

American Journal of Physiology-Lung Cellular and Molecular Physiology

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

Translational Research in Acute Lung Injury and Pulmonary Fibrosis

(Submission deadline: July 1, 2013)

American Journal of Physiology—Regulatory, Integrative, and Comparative Physiology

Inflammation and Immunity in Organ System Physiology

(Submission deadline: June 30, 2013)

Integrative Aspects of Energy Homeostasis and Metabolic Diseases

(Submission deadline: June 30, 2013)

Advances in Physiology Education

Teaching and Learning of Professional Ethics

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

Nitrite and Nitrate in Human Health and Disease

Nathan S. Bryan, PhD and Joseph Loscalzo, MD, PhD
Adrianne Bendich, PhD FACN
ISBN #: 978-1-60761-615-3
e-ISBN 978-1-60761-616-0
Springer New York Dordrecht Heidelberg London

The book titled "Nitrite and Nitrate in Human Health and Disease" is a well-written scientific book that stimulates the curiosity of the reader, regardless of the reader's scientific background. The book is suited for audiences ranging from high school students to professionals in academia. The major objective of this book is to assemble all the scientific literature available on this topic in a single volume and present it in a systematic manner. The book illustrates the importance of Nitrite, Nitrate, and Nitric Oxide in promoting overall human well-being. The theme of the book is to mainly discuss the contribution of Nitrite and Nitrate derived Nitric Oxide (NO) in promoting human health. NO, both endogenous and produced from nitrate and nitrites can be used as a treatment option for a vast array of human diseases. The book was written to promote the reader's perception about the health benefits of Nitrates and Nitrites over the old notion of carcinogenic risk.

The book was organized in a systematic manner starting with an introductory chapter that discusses the discovery of NO. Nitric oxide synthesis pathways and the importance of NO in human diseases have been mentioned in the introduction. Subsequent chapters of the book were dedicated to provide a detailed scientific review of the following topics: formation of bioactive nitrogen compounds; NO synthesis pathways; food sources and nutritional impact; Nitrate and Nitrites in human breast milk; regulation of dietary nitrate and nitrites; Biochemistry of NO signaling, importance of Nitrites and Nitrates in several disease conditions such as Ischemia reperfusion injury, cardiovascular diseases, microbial diseases and inflammatory disorders; cancer risk; and future studies. The authors have done a wonderful job reiterating the importance of breast

feeding and consuming food rich in Nitrates and Nitrites for the sake of long term health benefits. The authors maintained a fairly good fluidity by providing a smooth transition between chapters. The book has additional strengths, including adequate use of the literature, the use of diagrams for clarity, and, finally, the ability to convey the message to the audience. This book can be improved by including the contribution of acidic urine (1) in non enzymatic NO production. Further, by the addition of literature explaining the detection of Nitrite derived NO apart from endothelium derived enzymatic NO using Electron Paramagnetic Resonance (EPR) spectroscopy would also be an improvement (2-4).

The book titled "Nitrite and Nitrate in Human Health and Disease" can be summarized as follows:

Nitric oxide was discovered as a signaling molecule in 1980s by Drs. Louis J. Ignarro, Robert Furchgott, and Ferid Murad. In 1998, the Nobel Prize for Physiology or Medicine was awarded for this discovery. The discovery of NO, a colorless odorless gas that can perform a vast array of biological functions was truly a masterpiece and one of the most important discoveries in cardiovascular medicine. NO is an endogenously produced molecule that regulates endothelial function and blood flow. It serves multiple purposes ranging from vasodilator/anti-hypertensive to mediator of anti-atherogenic, anti-microbial/host defense, anti-ischemia-reperfusion injury and anti-inflammatory actions. NO is endogenously generated from L-Arginine via the enzyme nitric oxide synthase (NOS). Upon production of NO, it is oxidized to Nitrate and Nitrite and then can be recycled to form NO under certain conditions, such as the presence of anaerobic bacteria in the oral cavity and the acidic conditions in the stomach. The NO generation can be modulated by the diet independent of its endogenous synthesis.

Humans get exposed to nitrates and nitrites by consuming food rich in Nitrate and Nitrite such as water, greens, beet root, and cured meats. Anti oxidants such as vitamin C and poly phenols enhance NO production in many ways and protect against production of carcinogenic nitrosamines in most cases. However, in the presence of

dietary lipids, Vitamin C can promote the formation of carcinogenic N-nitrosamines. Because of the risks of gastric carcinogenesis and methemoglobinemia in infants there are dietary regulations of Nitrates in the drinking water set forth by World Health Organization. However, many diets rich in fruits and vegetables such as the Japanese diet exceeds these limits and are not associated with cancer risk. Nitrates and Nitrites play a pivotal role against several diseases and offer enormous therapeutic potential for the treatment of these diseases. The health benefits of consuming diets rich in Nitrates and Nitrites outweigh the minor risk associated with it.

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(Note: for the summary of the book references are available upon request).

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Alternative Careers in Science: Leaving the Ivory Tower. 2nd ed.

Robbins-Roth, Cynthia, (Ed.). (2006). Burlington, MA: Elsevier Academic Press.

Where do young physiologists go for career advice? Recommendations from professors and other successful academic scientists may not provide an entirely diverse perspective on career options. To gain a varied perspective, one must first identify and then navigate business, political, financial, entrepreneurial, or any other occupation where science can, and does, have an extremely important impact. This task can be daunting for a scientist with very little exposure to career alternatives outside of academia. A great starting point (and long-term resource) is the second edition of *Alternative Careers in Science: Leaving the Ivory Tower* abridged by Cynthia Robbins-Roth. This book is a collection of testimonials and stories from authors who prosper in rewarding and impactful careers with science, discovery, and exploration at their cores.

This book is generally separated into sections that are organized by career focus. These sections include: Science and Information (science writing & publishing), The Financial World (venture capitalist & investments), The Corporate World (entrepreneurship, product development, & marketing), Providing Services to Companies (scientific consulting & business strategy), and Science Careers in Government (policy development & communication). Within a section (career focus), chapters are written by contributing authors who define their own specific career path and job description. Throughout the chapters, contributing authors follow a specific format that includes a description of career path (how they got there), qualifications (including how a graduate degree in science provides an edge), required skills, basic responsibilities, a typical day, earning potential (salary range), and what they like or dislike about the job. In addition to this general format, most authors include narratives or anecdotes about their passion for science, how science has directed their career, and how they “connected-the-

dots” between their scientific training and their current job. To peak the interest of the reader, the editor has separated some of the more thought provoking and inspiring anecdotes and highlighted them throughout the book.

The chapter format and each author’s writing style make the 10-15 page career descriptions easy to read. Because the book is organized by career focus, reading the chapters in sequential order is not required. As a result, the reader can begin with any specific career of interest and learn how the author navigated a successful career path. If one possesses certain skills or has specific interests outside of science, one can read how the authors integrated different areas of expertise or different interests within science to pursue a rewarding career. In addition, the book’s structure makes an excellent resource for professors or university career counselors with students interested in science professions outside of academia. As the student’s interests and skills become evident, they can be directed to specific career options within the book.

An invaluable component to this book is the author’s advice on how to combine a passion for science with other interests. For example, one author describes the desire to “create a group that would study the biotechnology industry and provide strategic business information.” This specific author combined biology, technology, and strategic business planning to create a successful consulting organization. Another common piece of advice that arises in just about every author’s description of his or her career path, is the important connection to a mentor, often multiple mentors (in and out of science). These mentors played a significant role in helping to guide authors in carving out a specific career. In some cases, the contributing author will offer advice regarding further education beyond a terminal science degree. That is, whether or not another degree (e.g. MBA) was required or helpful to obtain his/her goals. Although recommendations on another degree as a requirement were mixed, paying attention to the author’s rationale for their perspective on the topic allows the reader to form a more informed opinion.

A limitation of this book for physiologists specifically may be that the testimonials come mostly from the biotechnology field; therefore, the job descriptions may not always apply directly to the diverse discipline of physiology. However, the strength of the book is not that it provides a schematic or blueprint to success for any specific career. The reader should focus on the individual journey of the scientist, the specifics of the job description and the fact that significant opportunities and options exist for creative scientists in non-academic careers. The strength of this book is in learning how others have successfully integrated science with other skills and interests to reach their desired career goals. What motivated these scientists? How did they go about achieving success in their career? In all of the stories contained in this book, the authors observed and then took advantage of opportunities. They leveraged critical scientific thinking, exploration, and knowledge integrated with finance, business, politics, etc. to develop a stimulating and rewarding career. Because of this, the book is an excellent resource for any scientist, but especially those scientists searching for challenging and impactful careers outside of the traditional academic model. ♦

Brad W. Wilkins, PhD
Nike Sport Research Laboratory,
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Member, APS Career Opportunities in
Physiology Committee

Thomas J. Schmidt, PhD
Carver College of Medicine,
Univ. of Iowa
Chair, APS Career Opportunities in
Physiology Committee

Administrative Position

Executive Director: The Human Anatomy and Physiology Society (HAPS) invites applications for the position of full-time Executive Director. HAPS is an organization of 1,700 educators dedicated to enhancing the quality of human anatomy and physiology education, encouraging innovation in teaching and promoting professional development. The Executive Director should have the energy, vision, and creativity to move the organization to the next level through the implementation of new initiatives. The successful candidate will demonstrate excellent leadership, management, organizational, and communication skills and must also have demonstrated grant writing and administrative experience. The Executive Director will implement a strategic plan that involves close communication with the HAPS Board of Directors, Committee Chairs, and the HAPS Business Manager. In addition, the Executive Director will oversee and administer HAPS Institute (HAPS-I), a graduate-level, credit-based program for Anatomy and Physiology Faculty. The candidate should demonstrate strong technological and web competence. He or she will support the fundraising activities of the HAPS Foundation and foster relationships with partner organizations. An advanced degree is required (doctorate preferred), along with experience in higher education. Teaching in Anatomy and Physiology, biomedical, or biological sciences is a plus. Some travel expected but need not relocate. Anticipated start date is January 1, 2013. To apply, send a cover letter, curriculum vitae, writing sample and three letters of reference to Shanan Molnar, HAPS Business Manager at smolnar@asginfo.net. Consideration of application will begin on August 1 and will close when the position is filled.

Faculty Position

Assistant or Associate Professor, Cardiovascular Physiology: The Department of Biomedical Sciences (BMS) at Colorado State Univ., Fort Collins, seeks a scientist and educator to fill a tenure-track or tenured position at the rank of Assistant or

Associate Professor. Cardiovascular research interests within the Department include the effects of reactive oxygen species on arterial smooth muscle ion channels and their impact on vascular function under pathophysiological conditions; the significance of transient receptor potential (TRP) channels in vascular function during health and disease, blood flow and angiogenesis changes during pregnancy, and the effects of dietary fatty acids on myocardial structure and function. Interests of adjunct faculty include control of vascular tone in humans during exercise and hypoxia, and the influence of essential fatty acid metabolism, membrane phospholipid remodeling, and mitochondrial dysfunction in heart failure and cardiovascular disease. The Vascular Physiology Research Group, composed of members of BMS and other departments, is a highly collaborative and productive unit that constitutes the core of an emerging Cardiovascular Research Center. Preference will be given to candidates with an established research program in cardiovascular science integrating cellular/molecular studies with whole-organism physiology. The successful candidate is expected to maintain an independent, extramurally-funded research program, preferably in an area that complements existing departmental strengths in neuroscience and/or reproductive physiology. These groups constitute two Univ. Programs of Research and Scholarly Excellence; the Molecular, Cellular and Integrative Neurosciences Program (MCIN) (<http://mcin.colostate.edu/>) and the Animal Reproduction and Biotechnology Laboratory (ARBL) (<http://www.cvmbs.colostate.edu/bms/arbl/>). Interests of MCIN faculty include ion channel and neurotransmitter receptor structure/function, mechanisms of neurotransmitter release, integrative neurotransmission, neuroendocrinology, and developmental neurobiology. Faculty interests within ARBL include gamete biology, gonadal function, molecular endocrinology, embryo development, embryo-uterine and placental-fetal interactions, fetal development, parturition, reproductive disease and toxicology, and zoonoses. Opportunities for collaboration exist with faculty in clinical and basic science departments across campus. The CSU Veterinary Medical Center (<http://csuvth.colostate.edu/>) houses MRI, CT, and

PET imaging technology and a clinical cardiology service with advanced cardiothoracic surgical capabilities. Joint appointment to the School of Biomedical Engineering, an interdisciplinary program that bridges four colleges and 13 departments, is available for interested and qualified applicants (<http://www.enqr.colostate.edu/bep/>). Expansion of existing collaborations with physicians at the Medical Center of the Rockies in nearby Loveland, CO is supported. Core facilities available to the successful applicant include central AAALAC approved animal care facilities, well-equipped general instrumentation rooms, a large-animal hypobaric chamber, echocardiography, a fluorescence-activated cell sorter/flow cytometer laboratory, a microscope laser-capture microdissection laboratory, confocal microscopes including a Zeiss LSM 510 Meta and a spinning disk confocal dedicated to live cell imaging, Total Internal Reflection Fluorescence (TIRF) and super-resolution (STORM) microscopy, an electron microscopy center equipped with transmission and scanning EM, and the University's Proteomics and Metabolomics Facility (<http://www.pmf.colostate.edu/>). The individual selected for this position will be expected to teach within the undergraduate, graduate and/or professional veterinary medicine programs. Teaching responsibilities will be in the general area of physiology. The Department sponsors an undergraduate Biomedical Sciences major and both MS and PhD graduate programs. Departmental faculty also participate in DVM/PhD training. Additional information about the BMS Department and faculty can be found at www.cvmbs.colostate.edu/bms. Fort Collins is a community of 144,000 people located in the foothills of the Rocky Mountains approximately 60 miles north of Denver. The city offers outstanding outdoor recreational opportunities and quality of life. Fort Collins was named *Money* magazine's Best Place to Live 2006, #2 in 2008, and #6 in 2010. Additional information on the city of Fort Collins can be found at www.fcgov.com. Applicants must have a PhD, DVM, MD or equivalent degree and a minimum of two years of postdoctoral experience with evidence of research productivity. In addition, applicants must provide evidence of competitiveness for independent national-level funding for their

research program. A letter of application, curriculum vitae, statements of research and teaching interests, and a list of three references should be sent electronically to the chair of the search committee: Dr. Scott Earley, care of Karen Solomon, at Karen@Solomoncolostate.edu. Review of applications will begin September 1, 2012, and continued to be accepted until a successful candidate is found. Candidates will be notified before references are contacted. Colorado State

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action. The Office of Equal Opportunity is located in 101 Student Services. Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search and motor vehicle history.

Wine Wizard

Hi all: Here is what I said June 2011 in introducing the column – still applies.

“This is the time of year to sniff out backyard BBQ (should I say grill?) type wines, defined thusly: Cheap but not nasty. To go with burnt sausages & mustard, burnt chicken & potato salad, burnt ribs & BBQ sauce, burnt corn dripping with saturated fat, burnt apple pie & ice cream, you get the picture. Impossible. Naaagh, as the goat in the TV ad is prone to say. Anything’s possible with enough ethanol.”

Whites:

2011 Salneval Albarino, Valle del Salnes, Spain \$9. Good, cheap albarino is scarce. This one fits the bill. The nose is very clean with peach and lemon. The palate is medium weight but forward with stone fruit and lime. It is clean, with bright acid and good length. Great sipping wine, when chilled, on a warm afternoon by the pool, BBQ.....sigh.

2011 Tilia Torrontes, Salta, Argentina \$8. The only thing slightly off with this one is a faint wet wool nose and taste, but this kinda blows off with time in the glass. Otherwise, great nose of lychee, stonefruit and cashew; palate of rich apricot/citrus flavors and bright acid with a dry finish. The mouthfeel is viscous, and the wine has good length.

2010 St. George Chardonnay, California, \$5. Here is a tasty party wine. It has simple, clean, tropical fruit and low oak on the nose. The palate is quite viscous and rich with tropical fruit, very low oak, but a clear touch of

residual sugar (ie, sweetness) is there – not too much, but you have to like an off-dry wine. It is clean, has very good acidity and length. Great value and popular party wine.

2010 Heron Chardonnay California \$9. This has a lively green apple nose. The palate is fresh and clean with very good acid, and flavors of apple, citrus and a hint of passionfruit. There is very little oak to taste, it is clean and has good length. Tasty but not complex.

2010 14 Hands White blend, “Hot to Trot” Columbia Valley, Washington \$9. I guess these guys like burros. This is a chardonnay/pinot gris blend with a nose of citrus and apricot. The palate is tart but yet almost sweet and viscous with tropical and lemon flavors, and a dry lemony kick at the end.

Red wines

2008 SXS (say that ten times quickly) Shiraz, South Australia \$9. This wine has a nose of plums, blueberry and a little eucalyptus. The palate is ripe but not overextracted, with floral raspberry/blueberry flavors. It is medium bodied, clean, not tannic, and has decent length and acid. Party on.

2010 Columbia Crest Red wine “Les Chevaux”, Horse Heaven Hills, Washington \$10. More horses. This has a slightly piney, cherry nose and a very lush palate with ripe red cherries. The tannins are soft, and there is spice (cinnamon/cardamom). It is a bit simple, but easy to drink and a good party red.

2009 Lincourt Pinot Noir, California \$17. This wine has some dill (American oak) and lots of floral red berries on the

nose. The mouthfeel is a bit thin/light but the fruit flavors are very good with cherries, and a bit of earth and cola. There is slight spice, good acidity, and soft tannins. Does it cost too much? Yes.

2010 August West Pinot Noir, Santa Lucia Highlands, California \$36. Terrible price, excellent wine. The nose is average - oak and red cherries, but the palate is quite remarkable with intense red and dark berry fruit, earth, cola, and cedar. It is not too oaky and not tannic, has balanced acid and good length. This is a complex wine with lots going on, so if you wish to splurge on a Pinot, this is a good bet.

2010 Bodegas Atalaya Laya, Grenache (70%)/Monastrell (30%), Almansa, Spain \$6. This is a great everyday and/or party wine – you do party every day, so what’s to lose? The color is inky; the nose is quite intense with grapey dark berry characters, some black pepper and – here’s the rub – various other features depending on random bottle selection. I have now tried this three times. Once it was clean, a second time it had a touch of oak char (that’s OK), and the third bottle had clear rubber-glove sulphur that was not overwhelming, but still slightly detracting. They all had the same great young intense fruit on the palate, soft tannins, a touch of black pepper, and very good acid and length. I guess quality control is tough when you are selling the wine for \$6.

Just what the burnt this-and-that on the grill calls for. Or is it BBQ? ❖

September 1-6

AAPS 2012 Congress, Alexandria, Egypt. *Information:* African Association of Physiological Sciences, Office of the Secretariat, 82 Bulwer Road, Durban 4001, South Africa. Tel.: +27 31 2011392; Fax: +27 31 2013950; Internet: <http://www.aapsnet.org/conferences.htm>.

September 4-6

Cardiac & Respiratory Physiology Themed Meeting, Manchester, UK. *Information:* The Physiological Society, Peer House, Verulam Street, London, WC1X 8LZ. Tel.: +44 (0) 207 269 5725; Email: events@physoc.org; Internet: <http://www.physoc.org/cr2012/>.

September 10-14

Cellular and Molecular Mechanics, London, England. *Information:* Internet: <http://www3.imperial.ac.uk/bioengineering/events/gem4>.

September 20-22

Second International Conference on H2S Biology and Medicine, Atlanta, GA. *Information:* Jackie Burkhardt, Strategic Results, JHU@Eastern Building, 3225 Ellerslie Avenue, Suite 303E, Baltimore, MD 21218. Tel.: 443-451-7026; Fax: 443-451-7256; Internet: <http://h2sbiomed2012.org>.

September 29 - October 4

24th Scientific Meeting of the ISH - Hypertension Sydney 2012, Sydney, Australia. *Information:* Internet: <http://www.ish2012.org>.

October 2-3

10th Annual Functional Genomics Screening Strategies, Boston, MA. *Information:* Tanuja Koppal, Ph.D., Conference Director, Cambridge Healthtech Institute. Tel.: (+1) 973-525-4667; Email: tkoppal@healthtech.com; Internet: <http://www.discoveryontarget.com/RNAiForFunctionalScreens/>.

October 3-5

The 6th Ukrainian Congress of Pathophysiology (USP2012), Crimea, Ukraine. *Information:* Internet: <http://www.patfiz-csmu.net/ru/congress-6-en-welcome.html>.

October 5-6

Pittsburgh International Lung Conference, Acute Lung Injury: New Mechanism, Future Therapies and the Translation to Clinical Care, Pittsburgh, PA. *Information:* Internet: <http://www.strategicresults.com/upitt>.

October 10-13, 2012, Westminster, CO

APS Intersociety Meeting: Integrative Biology of Exercise VI. *Information:* <http://www.the-aps.org/mm/Conferences/APS-Conferences/2012-Conferences/Integrative-Biology-of-Exercise>.

October 22-25

2nd International Neural Regeneration Symposium (INRS2012), Shenyang, China. *Information:* Internet: http://www.crter.org/E_Journal/e-images/meeting1.jpg.

October 18-21

Pan American Heart Failure Congress (PAHF 2012), Panama City, Panama. *Information:* Mrs. Tali Ogorek, Conference Secretariat, Paragon-Conventions, 18 Avenue Louis-Casai, 1209 Geneva, Switzerland. Tel.: 41 22 5330 948;

Fax: 41 22 5802 953; Email: secretariat@pahfcongress.com; Internet: <http://www.pahfcongress.com>.

October 28-30

45th Annual Meeting of the Society for Leukocyte Biology, Maui, Hawaii. *Information:* Society Management Services, 9650 Rockville Pike, Bethesda, MD. Tel.: 301-634-7814; Fax: 301-634-7455; Email: slb@faseb.org; Internet: <http://www.leukocytebiology.org>.

November 14-18

XVI Latin American Congress of Pediatrics (ALAPE 2012), Cartagena de Indias, Columbia. *Information:* Ms. Tali Ogorek, Paragon Conventions, 18 Avenue Louis-Casai, 1209 Geneva, Switzerland. Tel.: 41 22 5330 948; Fax: 41 22 5802 953; Email: secretariat@congresosalape.org; Internet: <http://www.congresosalape.org/>.

November 22-25

The 2nd International Multidisciplinary Forum on Palliative Care, Florence, Italy. *Information:* Conference Secretariat, Paragon-Conventions, 18 Avenue Louis-Casai, 1209 Geneva, Switzerland. Tel.: 41 22 5330 948; Fax: 41 22 5802 953; Email: mfridenzon@paragon-conventions.com; Internet: <http://www.imfpc.org>.

December 2-4

Innovations in Cardiovascular Interventions (ICI 2012), Tel Aviv, Israel. *Information:* Shirley Dinenson, 60 Medinat Hayehudim St., Herzliya 46766. Tel.: 972-3-5767739; Email: secretariat@icimeeting.com; Internet: <http://www.icimeeting.com>.

December 6-9

The World Congress of Clinical Lipidology, Budapest, Hungary. *Information:* Paragon-Conventions, 18 Avenue Louis-Casai, 1209 Geneva, Switzerland. Tel.: +41 22 5330 948; Fax: +41 22 5802 953; Email: vhyman@paragon-conventions.com; Internet: <http://www.clinical-lipidology.com>.

December 11-13

Metabolism and Endocrinology Themed Meeting, London, UK. *Information:* The Physiological Society, Peer House, Verulam Street, London, WC1X 8LZ. Tel.: +44 (0) 207 269 5725; Email: events@physoc.org; Internet: <http://www.physoc.org/me2012/>.

2013

March 7-10

The 6th International Conference on Ocular Infections (ICOI), Santa Monica, CA. *Information:* Shirley Dinenson, Conference Secretary, 18 Avenue Louis-Casai, 1209 Geneva, Switzerland. Tel.: +41 22 5330 948; Fax: +41 22 5802 953; Email: sdinenson@paragon-conventions.com; Internet: <http://www.ocularinfections.com/>.

March 10-13

The Jerusalem International Conference on Neuroplasticity and Cognitive Modifiability, Jerusalem, Israel. *Information:* Internet: <http://www.brain-conference.com/en/>.

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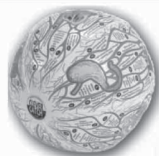
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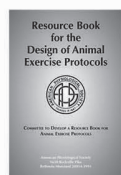
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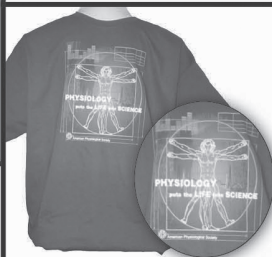
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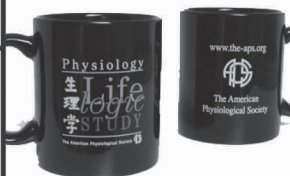
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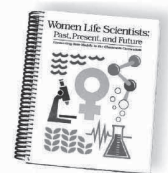
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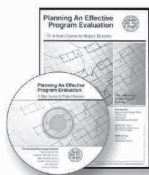
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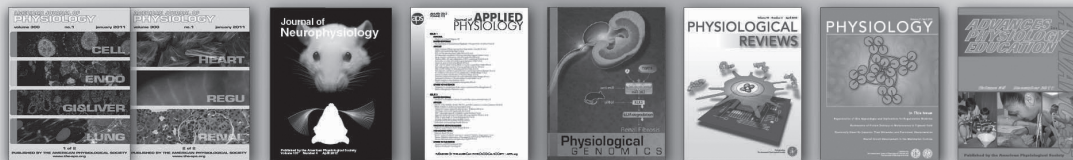
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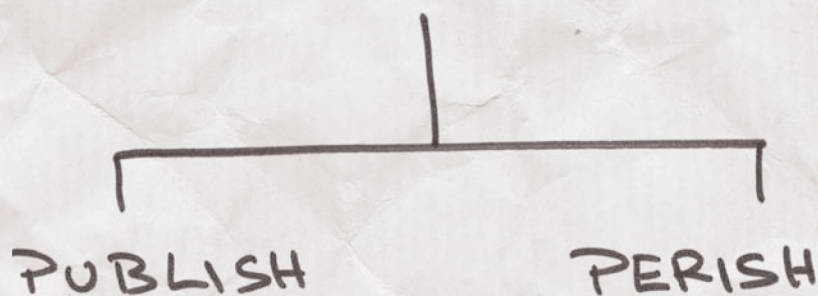
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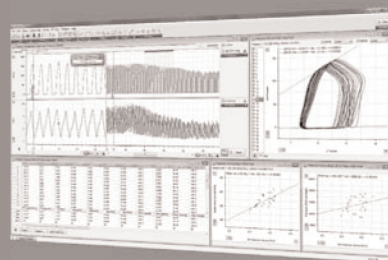


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