



The Physiologist

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Munzenmaier Receives First Early Career Professional Service Award

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

Munzenmaier has been very active in her community, department, and institution. In addition, she has served nationally with NIH and APS and internationally with the World Congress of Microcirculation.

Locally and regionally, Munzenmaier has served as judge and chair of various K-12 science fairs throughout Wisconsin and the southeastern region of the state. Because of her strong commitment to K-12 through medical school education, she was appointed to the APS Education Committee. As a Committee member, she urged greater interaction between physiology faculty members and K-12 teachers and students. To stimulate that interaction, she proposed, developed and helped pilot test the K-12



APS President Hannah V. Carey and Angela J. Grippo, Chair of the Trainee Advisory Committee, present the first Early Career Professional Service Award to Diane H. Munzenmaier.

outreach program, Physiology Understanding Week (PhUn Week). Phun Week has met with great acclaim and has grown in just three years into a program that is held at locations across the US and its territories and that involves undergraduate and graduate students, as well as faculty.

Munzenmaier has taught courses in physiology for the general public, as well as at the undergraduate, graduate and medical student levels. She has been very involved in the Summer Program for Undergraduate Research at the Medical College of Wisconsin. She has served as a judge for the APS David Bruce Awards in Undergraduate Research and encouraged her depart-

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Time: 5:45 PM, Tuesday, April 8, 2008
Place: San Diego, CA

I. Call to Order

The meeting was called to order at 5:45 PM by **President Hannah V. Carey**, who welcomed the members to the 161st Business Meeting of the American Physiological Society. A booklet containing the agenda and a listing of all the APS award recipients was distributed.

II. Election of Officers

President Carey announced the results of the election. The election was conducted via an online ballot. The new President-elect is **Gary Sieck**, Mayo Medical School, (April 9, 2008 – April 13, 2011). The three newly elected Councillors are **Gordon Mitchell**, University of Wisconsin, Madison; **Frank Powell**, University of California, San Diego; and **Linda Samuelson**, University of Michigan (April 9, 2008–April 13, 2011). They are replacing Susan Barman, Irving Joshua, and Gary Sieck who are completing three-year terms on Council. The newly elected Councillors will serve a three-year term. All newly elected officers will assume office at the close of the Annual Meeting.

III. Bylaw Change

In compliance with the Bylaws of the Society, the proposed amendment to the Bylaws would eliminate the six regular members of the Society appointed by Council. The proposed amendment was published in *The Physiologist* [50(6): 244, 2007].

The motion was unanimously passed by the membership approving the amendment to the Bylaw as follows:

ARTICLE V. Standing Committees. SECTION 5. *Joint Program Committee.* A Joint Program Committee composed of ~~six regular members of the Society appointed by Council~~ and elected representatives of the sections and groups shall be responsible for scientific programs of the Society. The term of each member shall be for three years; a member may not serve more than two consecutive terms. The Council shall designate the Chairperson of the Committee, who shall be an ex officio member of the Council, without vote. The President Elect and Executive Director shall be ex officio members, without vote.

IV. State of the Society

President Carey addressed the membership and spoke on the state of the Society. She said that APS has outstanding committees and a hardworking staff that helps to make the Society a successful organization.

A. Conference Committee

The Conference Committee is a new committee resulting from the 2006 Strategic Plan. The Committee charge is to improve the APS Conference Program and encourage the submission of more conference proposals. The Committee Chair is Darwin Bell, Medical University of South Carolina. Carey said that the Committee is eager to hear from the membership about cutting edge science that can be promoted through conferences. The deadlines for submitting conference proposals are April 1, August 1, and December 1. The submission form can be found on the APS web site at <https://www.the-aps.org/Eforms/PROPOSALS/Security/SignIn.aspx>.

B. Future APS Meetings

There will be an APS Conference entitled Integrative Biology of Exercise, September 24-28, 2008 at Hilton Head, SC. The Experimental Biology 2009 meeting will be April 18-22, in New Orleans, LA.

C. Beijing Meeting

Carey said that APS is participating in a multi-society joint meeting in Beijing, China in October 2009. The purpose of this meeting is to increase cooperation and collaborations with colleagues in Asia. The societies participating in this meeting are: Chinese Association of Physiological Sciences, Australian Physiological Society, Canadian Physiology Society, The Physiological Society, and APS.

APS will be offering a travel award program to attend this meeting. There will be 60-70 awards made at \$750 each. The application for this program is online on the APS website.

D. Early Career Professional Service Award

Carey said that APS instituted a new award this year—the Early Career Professional Service Award. This award is presented to an APS member in the early career stage (graduate student, post-doctoral fellow, assistant professor or equivalent position). The goal is to

honor a member who has made outstanding contributions to the physiology community and demonstrated dedication and commitment to furthering the broader goals of the physiology community.

E. K-12 Minority Outreach Fellowships

Carey said that APS also introduced another new award this year—the K-12 Minority Outreach Fellowships. This award is to provide outreach to K-12 students, and to help members interact with students at this level. By participating in this program, APS members will be able to improve their teaching skills to students at these levels; reach out to the next generation of minority scientists; participate in outreach activities to K-12 students and teachers; and become more comfortable talking about physiology careers to students and others.

F. Communications

Carey reported that the APS Podcast program has been started by the Communications Office. There have been six podcasts produced, all of which are available on the APS website.

G. Publications Program

Carey said that the Publications Department has reported that they have decreased the time from acceptance to publication of manuscripts from 4 months to 2.5 months. Carey also reported that the Publications Department has started using the new online manuscript submission and peer review system from e-Journal Press. The transition from ScholarOne to the new system has been going smoothly.

Carey said that the NIH Public Access Plan that requires mandatory submission of NIH-funded research manuscripts into PubMedCentral (PMC) became effective April 7, 2008. APS grants its authors permission to provide a copy of the accepted manuscript to NIH upon acceptance of the manuscript for journal publication, with public release in PMC twelve months after final print publication by the Journal. APS is negotiating a deposit agreement with NIH to help its authors with the burden of depositing manuscripts.

H. Science Policy

Carey said that as APS President, she was able to testify before Congress regarding funding for NIH, NASA, and NSF. She said that APS has an out-

standing Public Policy department that is available to assist members when they wish to speak to their local and national representatives, and provides direction and help with letter writing campaigns.

I. Animal Care Committee

Carey reported that 15 APS members went to Capitol Hill on September 10, 2007 and met with the staff of 22 Senators and Representatives to discuss the Animal Welfare Act amendments in the farm bill, and how these amendments would harm biomedical research. The House has already adopted amendments that would prohibit live animal demonstrations of medical devices for sales purposes, and eliminate USDA-licensed Class B dealers as a source of non-purpose bred dogs and cats. She said that the Senate passed the Class B language, but it was not identical to the language passed by the House. APS has asked the House-Senate conferees on the farm bill to strike both sets of language from the farm bill.

J. PRISM

Carey said there is a lack of resources linking basic physiology to integrated physiology. Carey said that PRISM is an initiative aimed at creating a National Center Network for Physiological Research, Integration, Synthesis and Modeling that would link research and data from various institutions and have it reside in one database. This information could be used for modeling, identify gaps where we need more information on these species, etc. This center would also provide training for students.

K. Presidential Activities

Carey said that some of the activities she participated in during her term as APS President included testifying on the Hill, attending a reception for the 2007 Nobel Laureates where she met Al Gore, and while at giving a talk at Washington State University, interacting with bears at the Washington State University Grizzly Bear facility.

V. Report on Membership

A. Summary of the Membership Status

President-Elect Irving H. Zucker reported on the status of the Society membership. As of February 9, 2006, the current membership of the Society is 9,887, of which 7,520 are regular mem-

bers, 31 are honorary members, 1,155 are emeritus members, 32 are affiliate members, and 1,149 are student members.

B. Deaths Reported Since the Last Meeting

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

VI. Awards and Presentations

A. Ray G. Dagg's Award

The 2008 Dagg's Awardee is L. Gabriel Navar, Tulane University Health Science Center. Navar has made distinguished long-term contributions to the science of physiology through his outstanding research, education and professional activities, and in particular to the American Physiological Society through his superb service.

In 1998 Dr. Navar was elected as APS President. One of his initiatives during his term as President was to increase the APS membership. Navar has also served as a member of the Program Advisory Committee, Program Executive Committee, and Chair of the Long Range Planning Committee, and as a member of Council. In these capacities, he has made immense contributions to the functioning of the Society in a multitude of ways. Navar has played an important role in the Association of Chairs of Departments of Physiology both as a Councillor and as its President. He served as a representative for the ACDP to the AAMC Council of Academic Societies, and was a member of the Administrative Board of Council of Academic Societies 2004-2007.

Navar is a world-renowned physiologist, having made major contributions through his research in renal physiology and the pathophysiology of hypertension. He has conducted seminal research on tubuloglomerular feedback, the renin-angiotensin system, and the role of local angiotensin in regulating tubular function, the autoregulation of renal blood flow, the tubuloglomerular feedback system, and other aspects of renal hemodynamics and physiology. Navar has published more than 180 peer-reviewed full-length articles in the *American Journal of Physiology* and other top scientific journals.

He has been an extremely productive and innovative investigator and has stimulated the work of many other sci-

entists. He is recognized nationally and internationally as a major leader in his fields of research.

Navar is also a superb educator of physiology. He has taught medical physiology for many years not only at Tulane, but also at Louisiana State University. He is a wonderful mentor of young physiologists, including undergraduate, graduate, and medical students, as well as postdoctoral fellows.

Navar has been the Chairman of the Department of Physiology at Tulane University in New Orleans since 1988, and Co-Director of Tulane Hypertension and Renal Center of Excellence since 2001. He has been instrumental in building up the Physiology Department at Tulane to a prominent position both nationally and internationally.

After the unfortunate disaster of Katrina in August 2005, Navar played a pivotal role in getting the Department of Physiology and the School of Medicine back up and running. His leadership, determination, and effectiveness to rebuild the Department at Tulane are most admirable.

In recognition of his outstanding research, education and professional contributions, Navar has been the recipient of many prestigious awards. He received the MERIT Award in 1988 from the National Heart, Lung and Blood Institute and was elected as a Fellow of the American Association for the Advancement of Science in 1996. He has also been the recipient of the C.W. Gottschalk Distinguished Lectureship Award, the Lewis K. Dahl Memorial



APS President Hannah Carey presents the Ray G. Dagg's Award to L. Gabriel Navar.

Lectureship, the Scientific Councils Distinguished Achievement Award, and the Arthur C. Corcoran Award. In 1999, Navar received the Honorary Degree of Doctorem Honoris Causa from the Semmelweis University, Budapest, Hungary. Last year, APS presented Navar with the Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award, and the Robert W. Berliner Award for Excellence in Renal Physiology.

Navar is widely sought after by government and private funding agencies and scientific journals for his expert service on study sections and editorial boards, further attesting to his wide recognition and high standing in the scientific community.

B. 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. This year's selection committee was chaired by Roy D. Russ, Ph.D. who presented the Award to Penny Hansen, Memorial University, Newfoundland. Hansen's contributions to physiology education during her career have been among some of the most creative, and her mentoring and guidance to young faculty members is outstanding.

Hansen has spent her entire career at Memorial University of Newfoundland but with visiting appointments at a variety of other schools in Canada and abroad, including Maastricht,

Wuerzburg, and a memorable stint at St. George's in Grenada, where she endured Hurricane Ivan in 2004. Hansen teaches physiology to all levels of students, from undergraduates and nursing students to medical students and residents in nephrology, and she has received multiple teaching awards for her efforts, including two awards for outstanding teaching from medical students in 1989; one award from students in 1992; a 3M Teaching Fellowship from the Canadian Society for Teaching and Learning in Higher Education in 1990, and the Memorial University President's Award for Distinguished Teaching and the Order of the Killick, also in 1990.

In 1988 Hansen moved into administrative positions where she has helped shape the undergraduate medical curriculum. In 1999 she became the Founding Director of the Memorial University Centre for Collaborative Health Professional Education, where she was responsible for developing a new center whose mandate is to improve health professional education. Her work has shaped the curriculum at MUN and she continues to be an active participant in teaching physiology courses.

In recent years much of Hansen's informal teaching at Memorial has been mentoring young faculty members, helping them learn how to teach more effectively and how to implement an interactive, student-centered curriculum. She helped bring "clickers" into the curriculum and trained others to use them effectively. But her mentoring extends beyond Memorial; in recent years she has been working with a young faculty member from India as well.

Outside of her institutional duties, Hansen has multiple accomplishments that deserve recognition. She spent nine years (1992-2001) as the editor-in-chief of *Advances in Physiology Education*, where she concentrated on bringing the scholarship of teaching and learning to the journal. By the end of her term as EIC the journal had grown from two to four issues a year and had gained

recognition as the place to publish research and observations on physiology education. She worked tirelessly to disseminate information about the journal by going to various society meetings, such as the annual meeting of the Human Anatomy & Physiology Society in Beaumont TX.

A second area of creative accomplishment is Hansen's innovative approach to physiology education, as exemplified in her "triple-jump exam" and her curriculum based around the physiology of human situations. The latter approach was developed for medical students but proved popular and successful with undergraduate non-biology students. As a result, Hansen and her collaborators have written a textbook using the approach that is currently under contract with Grandview Press.

Finally, a significant portion of Hansen's accomplishments has been in the area of international physiology education. She has been active in teaching workshops designed to improve physiology teaching in developing countries both for the International Union of Physiological Sciences (IUPS) and for the Association of African Physiological Societies. She is currently co-chair of the IUPS Education committee and was instrumental in helping garner APS support for a teaching workshop to be held in Chile in 2008. Hansen's work is valued by our European colleagues and she is an editor of a book on European medical education—*An account of initiatives for change in medical education in Europe for the 21st Century*.

Hansen's stature as a premier physiology educator can be seen in her resume, with significant committee appointments from the APS, the AAMC, the Canadian Association for Medical Education, and the IUPS. She has helped shape medical and physiology education throughout Canada and the world.

C. 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, MD, PhD, Sachiko Kuno, PhD, and S&R Foundation. Dr. Ueno and Dr. Kuno are founders of Sucampo Pharmaceuticals, Inc., and S&R Foundation.



APS President Hannah Carey, Roy D. Russ, (chair of the Guyton Teacher of the Year Award selection committee), and Ann Lenehan, representative from Elsevier Mosby Saunders, present Penny Hansen, second from left, the Guyton Teacher of the Year Award.



APS President Hannah Carey presents Baljit Khakh the S&R Foundation Ryuji Ueno Award for Ion Channels or Barrier Function Research, along with Sachiko Kuno, Ryuji Ueno, founders of Sucampo Pharmaceuticals, Inc., and S&R Foundation.



APS President Hannah Carey presents the first Early Career Professional Service Award to Diane H. Munzenmaier; also pictured is Angela Grippo, chair of the Trainee Advisory Committee.

An annual award of \$30,000 is given 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. This year the Society is pleased to recognize the promise of Baljit Khakh, PhD, University of California, Los Angeles.

D. Early Career Professional Service Award

The Early Career Professional Service Award honors a member of the Society at an early career stage (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. The recipient of the first Early Career Professional Service Award is Dr. Diane H. Munzenmaier, Medical College of Wisconsin.

E. Giles F. Filley Memorial Awards

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

medicine. Awards are made to APS members working in the United States, who have demonstrated outstanding promise based on their research program. Carey presented the 2008 Giles F. Filley Memorial Awards to Ellen L. Burnham, MD, University of Colorado, Denver, and Anke Di, MD, PhD, University of Illinois at Chicago.

F. Lazaro J. Mandel Young Investigator Award

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



APS President Hannah Carey presents the Giles F. Filley Memorial Award to Ellen Burnham.



APS President Hannah Carey presents the Lazaro J. Mandel Young Investigator Award to Jennifer Gooch.



APS President Hannah Carey presents the Shih-Chun Wang Young Investigator Award to Colleen Hegg.



APS President Hannah Carey presents the Arthur C. Guyton Young Investigator Award to Mahendra Kavdia.



The 2008 David S. Bruce Awardees: Matthew P. Dukes, Sara M. Frieberg, James Godfrey, Marisa Goo, Kent A. Riemondy, Caitlynn Taylor, and Victoria M. Youngblood, along with APS President Hannah Carey.

outstanding promise based on his or her research program. Each award is for \$7,500 and is designated for the use of the awardee in his/her research program. Carey presented the 2008 Mandel Award to Jennifer Gooch, PhD, Emory University.

G. 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. An award is made to an APS member who has

demonstrated outstanding promise based on his or her research program. Each award is for approximately \$7,000 and is designated for the use of the awardee in his/her research program. Carey presented the 2008 Shih-Chun Wang Young Investigator Award to Colleen Hegg, PhD, Michigan State University.

H. 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 approximately \$15,000 and is designated for the use of the awardee in his/her research program. Carey presented the 2008 Arthur C. Guyton Young Investigator Award to Mahendra Kavdia, PhD, University of Arkansas.

I. Liaison with Industry Committee Awards

The Liaison with Industry Awards are given for the best abstract describing a novel disease model. This is the fifth



APS President Hannah Carey and Liaison With Industry Committee representative Craig Plato present the Liaison with Industry Committee Award to Mohammed Irfan Ali.



APS President Hannah Carey and Liaison With Industry Committee representative Craig Plato present the Liaison with Industry Committee Award to Melissa A. Burmeister.

year this award has been given. Carey and Committee representative Craig Plato presented the 2008 Liaison with Industry Awards to Melissa A. Burmeister, Cornell University College of Veterinary Medicine, and Mohammed Irfan Ali, Medical College of Georgia.

J. David S. Bruce Awards

The annual David S. Bruce Awards for Excellence in Undergraduate Research were granted to seven currently enrolled undergraduate students who are first authors on a poster presented at the EB meeting. Each receives a cash award of \$500. This year Matthew P. Dukes, Univ. Mississippi Medical Center; Sara M. Frieberg, Univ. Wisconsin, Madison; James Godfrey, Chapman Univ.; Marisa Goo, Univ. California, Davis; Kent A. Riemondy, Univ. of Utah; Caitlynn Taylor, Asbury College; and Victoria M. Youngblood, Univ. of New Mexico were selected as David S. Bruce Awardees.

K. Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards

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

L. NIDDK K-12 Minority Outreach Fellowships

The K-12 Minority Outreach Fellowship seeks to foster communication between minority graduate and postdoctoral students and middle/high school minority life sciences students. Program activities include year-long outreach fellowships for senior graduate students and postdoctoral fellows to visit K-12 classrooms, help conduct teacher professional development workshops, and attend scientific meetings. The 2008 Fellows are TanYa Gwathmey, Postdoctoral Fellow, Wake Forest University School of Medicine, and Keisa Mathis, Graduate Student, LSU Health Sciences Center.

M. Minority Travel Fellowships

The Minority Travel Fellowship Award program was established in 1987 for minority physiologists, and is open to advanced undergraduate, predoctoral, and postdoctoral students, who have obtained their undergraduate education in Minority Biomedical Research Programs (MBRP) and MARC eligible institutions, as well as students in the APS Porter Physiology Development Program. Minority faculty members at the above institutions may also apply. Funds are provided for travel and per diem to attend the annual spring meeting. This program is supported by the NIDDK and the NIGMS. The intent of this award is to increase participation of pre- and postdoctoral minority students in physiological sciences. Frank announced that 53 Minority Travel Fellowship awards were presented to minority students to

help them attend the Experimental Biology 2008 meeting.

N. Porter Travel Fellows Award

The Porter Physiological Development Awards are designed to support the training of talented students entering careers in physiology by providing predoctoral fellowships for underrepresented students. Frank said that the APS has a long standing interest in promoting the training of minority students as evidenced by these awards. Each award includes an \$18,000 stipend. This year's recipients are: Heidy Contreras, University of California, Irvine; Jorge Gamboa, University of Kentucky; Anna Leal, UT Southwestern; Miren Maiz, UCLA; Keisa Mathis, LSU Health Sciences Center.

O. Undergraduate Summer Research Fellowships

In 2000, the APS Council approved funds to develop and support summer research fellowships for undergraduate students. The program was initiated in recognition of the importance of undergraduate research experience leading to a career in physiology research. These fellowships support full-time undergraduate students to work in the laboratory of an established physiologist. This year's recipients are: Blair S. Ashley, The College of William and Mary; Austin W. Blum, Cornell University; John A. Carr, University of California, San Diego; Kerin Carta, Syracuse University; Lindsay A. Davis, Albion College; Sarah B. Devlin, Kansas State University; Matthew P. Dukes, University of Mississippi; Theodore G. Eckman,



2008 Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awardees.



APS President Hannah Carey presents the Bodil Schmidt-Nielsen Distinguished Mentor Award to Joey P. Granger, along with Irving Zucker.



APS President Hannah Carey presents William Martin, outgoing Chair of the Central Nervous System Section, a plaque in recognition of his service.



APS President Hannah Carey presents Thomas Lohmeier, outgoing Chair of the Committee on Committees, a plaque in recognition of his service.



APS President Hannah Carey presents Patricia Molina, outgoing Chair of the International Physiology Committee, a plaque in recognition of her service.

Juniata College; Sara M. Freiberg, University of Wisconsin, Madison; Brianna L. Goldenstein, University of North Dakota; Sarah J. Jefferson, Pennsylvania State University; Maleka Khambaty, East Tennessee State University; Tamara Livshiz, University of Michigan; Kaitlin M. Moredock, University of Dayton; Jessica R. Priestley, Michigan State University; Linnea Pudwill, Colorado State University; Kristen N. Reynolds, Johnson C. Smith University, Ean R. Saberski, Rensselaer Polytechnic Institute; Richa Sharma, Indiana University; Kaniza Y. Tai, University of

Massachusetts; Anna C. Taylor, Asbury College; Kristin M. Thomas, University of Michigan; Matthew Welsh, University of Central Florida; and Daniel B. Yaeger, Willamette University.

P. Bodil Schmidt-Nielsen Distinguished Mentor Award

The Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award honors a member of the Society who is judged to have made outstanding contributions to physiological research and demonstrated dedication and commitment to excellence in training of young physiologists. The award was

established to recognize Dr. Bodil M. Schmidt-Nielsen, the first woman President of the Society and a distinguished physiologist who has made significant contributions in her field. The recipient of the 2008 Bodil Schmidt-Nielsen Award is Joey P. Granger, PhD, University of Mississippi Medical Center. He was formally recognized as the recipient of this Award at a ceremony held earlier in the week.

Q. Recognition of Outgoing Section Chairs

William Martin, Chair of the Central Nervous System Section, Pamela



APS President Hannah Carey presents Curt Sigmund, outgoing Chair of the Joint Program Committee, a plaque in recognition of his service.



APS President Hannah Carey presents John Williams, outgoing Chair of the Long Range Planning Committee, a plaque in recognition of his service.



APS President Hannah Carey presents Lisa Harrison-Bernard, outgoing Chair of the Membership Committee, a plaque in recognition of her service.



APS President Hannah Carey presents Norma Adragna, outgoing Chair of the John F. Perkins Memorial Fellowship Committee, a plaque in recognition of her service.



APS President Hannah Carey presents Gregory Florant, outgoing Chair of the Porter Physiology Development Committee, a plaque in recognition of his service.



APS President Hannah Carey presents Siribhinya Benyajati, outgoing Chair of the Women in Physiology Committee, a plaque in recognition of her service.

Carmines, Chair of the Renal Section, and Susan Gunst, Chair of the Respiration Section, complete their terms at the close of the EB08 meeting. Carey thanked them for their service to their sections and to APS.

R. Recognition of Outgoing Committee Chairs

Carey recognized the outgoing committee chairs and thanked them for their service to the APS. The outgoing chairs are Peter Friedman, Chair of the Awards Committee; Thomas Lohmeier, Chair of the Committee on Committees; Shu Chien, Chair of the Ray G. Daggs Award Committee;

Patricia Molina, Chair of the International Physiology Committee; Curt Sigmund, Chair of the Joint Program Committee; Chahrzad Montrose-Rafizadeh, Chair of Liaison with Industry Committee; John Williams, Chair of the Long Range Planning Committee; Lisa Harrison-Bernard, Chair of the Membership Committee; Norma Adragna, Chair of the John F. Perkins Memorial Fellowship Committee; Gregory Florant, Chair of the Porter Physiology Development Committee; and Siribhinya Benyajati, Chair of the Women in Physiology Committee.

S. Recognition of Outgoing Councillors

Councillors Susan Barman, Irving Joshua, and Gary Sieck will complete their terms at the close of this meeting. Carey thanked them for their service to the Society.

Dale Benos was recognized for his service as APS President. Carey said that Benos first started his service with the APS Council when he was elected as a Councillor in 1996, then he served as an *ex officio* member of Council when he served as Chair of the APS Publications Committee for six years, and then was elected as President. Carey said that Benos served in some of the most signif-



APS President Hannah Carey presents Sue Barman, outgoing Councillor, a plaque in recognition of her service.



APS President Hannah Carey presents Gary Sieck, outgoing Councillor, a plaque in recognition of his service.

icant leadership roles for the Society. Carey said that the APS Council attended a Washington DC Nationals baseball game during the summer Council meeting last year. At that game a bobble head of one of the players was given to the fans in attendance. She said that the idea of making bobble heads of the APS presidents was discussed on the bus ride to the hotel. So, the first APS bobble head was created—that of Dale Benos! Although Benos was not able to attend the meeting, Carey said that his bobble head will be sent to him.

T. New Business

No new business.

VII. Passing of the Gavel

Carey then passed the gavel to **Irving H. Zucker**, University of Nebraska Medical Center, incoming President of the American Physiological Society say-

ing that she “knows he will bring as much passion to the APS presidency as he has for his beloved New York Yankees.”

Zucker, upon accepting the gavel, said that he “hopes his bobble head is in a Yankee’s uniform. I want to thank Hannah for a great year and I have enjoyed working with her in every facet of the Society.”

There being no new business, the meeting was adjourned at 7:00.



*Irving H. Zucker
President-elect*



APS President Hannah Carey passes the gavel to Irving Zucker, the incoming President.



APS Past President Dale Benos presents a certificate to Stephanie Watts, Bowditch Lecturer.



APS President Hannah Carey presents a certificate to Barbara Block, Cannon Lecturer.

Bowditch Award Lecture

The Bowditch Lectureship is awarded to a regular member, under 42 years of age at the time of the lecture, for original and outstanding accomplishments in the field of physiology. Selected by the APS President, the recipient presents a lecture at the Experimental Biology meeting, which is considered for publication in the Society journal of their choosing. The recipient receives an honorarium of \$2,500, reimbursement of expenses incurred while participating in the

Experimental Biology meeting, and a plaque. The membership is invited to submit nominations for the Bowditch Lecturer. A nomination shall be accompanied by a candidate’s curriculum vitae and one letter detailing the individual’s status, contributions, and potential.

More information on the award and nomination procedures are available at <http://www.the-aps.org>. Nominations should be submitted online at <http://www.the-aps.org/awardapps>.



APS Council: Back Row: Ken Baldwin, Tom Pressley, Barbara Goodman, Jim Hicks, William Talman, Ron Lynch, J. Michael Wyss, Peter Wagner, Michael Portman. Front Row Dee Silverthorn, Sue Barman, Gary Sieck, Hannah Carey, Irving Zucker, David Pollock, Joey Granger.



APS Past Presidents: Back Row: William Danzler, D. Neil Granger, Barbara Horwitz, Walter Boron, Gerald DiBona, James Schafer, Douglas Eaton, Leonard Jefferson, Gary Sieck. Front Row: L. Gabriel Navar, Dale Benos, Hannah Carey, Irving Zucker, John West, Shu Chien.



Section Advisory Council: Back Row: Chet Ray, William Martin, David Brooks, Chris Cheeseman, William Welch, Frank Belloni, Kim Prisk. Front Row: Jim Rose, Michael Sawaka, David Goldstein, Ken Baldwin, Pamela Carmines, John Cuppoletti, Marilyn Merker.

ment to be a repeat sponsor of the special APS Undergraduate Poster Session.

Because of her concern with the declining use of animals in teaching medical students, Munzenmaier helped organize and redesign a new whole animal course for first-year medical stu-

dents. Due to her efforts, she was named the director of that course. She also recently volunteered to serve on the Medical College of Wisconsin's IACUC as part of her ongoing commitment to the use of animals in research.

Nationally, as mentioned above,

Munzenmaier is active in the APS, having served on the APS Education Committee and participating in many of the Committee's service activities. She also has served as a reviewer on two NIH Study Sections.

Internationally, Munzenmaier joined four other colleagues in organizing the eighth World Congress of Microcirculation Meeting. This planning process occurred over a three-year period with the meeting involving over 600 scientists from 30 countries.

Munzenmaier was honored at the Experimental Biology 2008 meeting during the APS Business Meeting. She will also write an article for a future issue of *The Physiologist* about professional service.

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

For information about applying for the 2009 Early Career Professional Service Award, see <http://www.the-aps.org/awards/society/earlycareer.htm>. ❖

APS Early Career Professional Service Award

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

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

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

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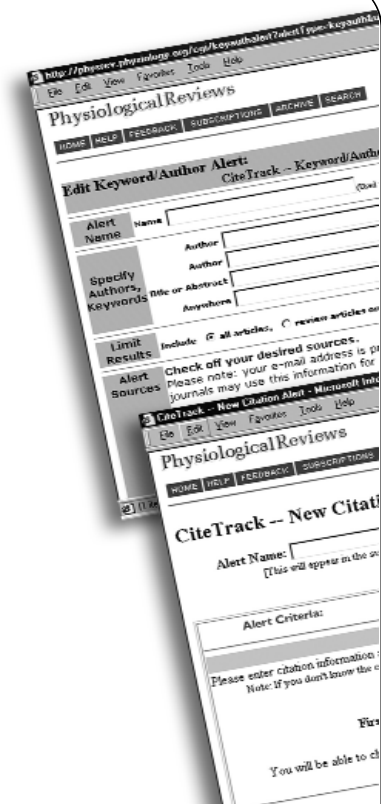
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Undergraduate Summer Research Fellows Attend EB

The 2007 Undergraduate Summer Research Fellows (UGSRFs) came to the Experimental Biology meeting to report on their research findings from last summer.

Eighteen of the 24 UGSRFs attended the meeting. Nineteen of the UGSRFs were authors on abstracts submitted to the meeting. Of those, 17 were first authors on their abstracts and two were authors on more than one abstract.

For the first time, all undergraduates who had first-author posters were invited to a special Undergraduate Orientation Session. The UGSRFs were joined by the 20 finalists for the David S. Bruce Awards for Excellence in

Undergraduate Research, in addition to approximately 30 other undergraduates for the session. Nansie McHugh, Chair of the Career Opportunities in Physiology 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. Angela Grippo, 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.

Zach Sellers, trainee member of the Career Committee, gave a talk on poster presentations and hints for making that a positive experience. Members of the Trainee Advisory Committee 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. ❖

Missed Experimental Biology 2008?

Attended EB2008 but missed APS trainee/education sessions?

You can still attend them!

Listen to the talks and view the PowerPoint presentations for:

Refresher Course on Respiratory Physiology
www.the-aps.org/education/refresher/RespiratoryPhysiology.htm

Career Symposium
Mid-career Transitions: Choices and Challenges
www.the-aps.org/careers/careers1/EBSymposia/EB2008symposium.htm

Trainee Symposium
Marketing Yourself on Paper for Academic Positions
www.the-aps.org/trainees/Symposia/2008symposium.htm

APS/ASPET Mentoring Symposium
Gainfully Employed: From Launching a Job Search to Navigating Negotiations
www.the-aps.org/careers/careers1/mentor/workshop/08wrkshp.htm

Undergraduate Research Highlighted at Special EB Session

EB 2008 provided the setting for the fifth annual APS Undergraduate Poster Session. This special session highlights the contributions of undergraduate students to physiology research. Students present their posters at both their regularly scheduled poster session and the special Undergraduate Poster Session. This year it was held on Sunday afternoon and culminated with the presentation of the David S. Bruce Awards.

Of the 137 undergraduate first authors invited to present at the APS Undergraduate Poster Session, 122 accepted the invitation and took advantage of the opportunity to display their poster and present it to interested scientists and guests. The session not only provided undergraduate students with an opportunity to highlight their research but also to meet faculty from many graduate schools and medical schools to discuss their future plans. Approximately 200 APS members and guests were in attendance at the session, with many comments heard as to the high quality of research being presented by the students. The students and their research were highlighted again this year in a special printed program distributed during the session.

This is the third year that graduate departments were invited to sponsor

the session and display promotional materials for their departments to those undergraduates considering graduate school. The following schools participated:

East Tennessee State Univ. Quillen College of Medicine, Biomedical Science Graduate Program;

Loma Linda Univ. School of Medicine, Departments of Physiology & Pharmacology;

Louisiana State Univ. Health Sciences Center at New Orleans, Department of Physiology;

Louisiana State Univ. Health Sciences Center in Shreveport, Department of Molecular and Cellular Physiology;

Medical College of Georgia, Department of Physiology;

Medical College of Wisconsin, Department of Physiology;

Michigan State Univ., Department of Pharmacology and Toxicology;

The Pennsylvania State Univ. College of Medicine, Intercollege Graduate Degree Program in Physiology;

Tulane Univ. School of Medicine, Department of Physiology;

Univ. of Alabama at Birmingham, Department of Physiology and Biophysics;

Univ. of Arizona, Physiological Sciences Graduate Interdisciplinary Program;

Univ. of Illinois at Urbana-Champaign, Department of Molecular & Integrative Physiology;

Univ. of Nebraska Medical Center, Department of Cellular and Integrative Physiology; and

Virginia-Maryland College of Veterinary Medicine Research and Graduate Studies, Biomedical and Veterinary Sciences.

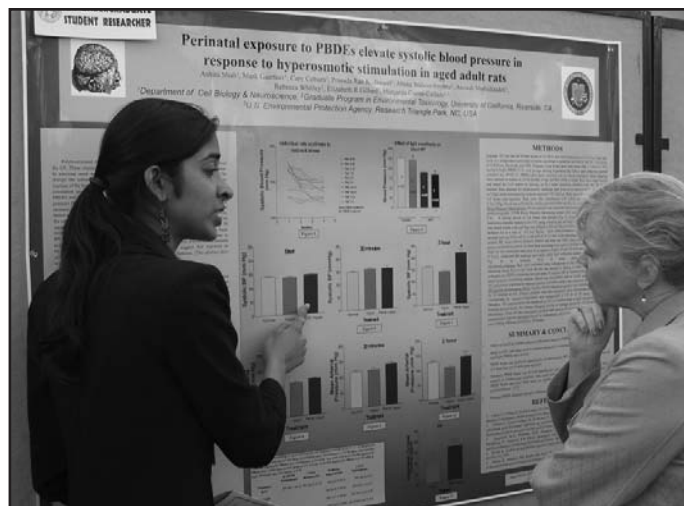
The departments also received a list of undergraduate presenters who indicated they were interested in being contacted about attending graduate school.

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 2009.

Departments who are interested in sponsoring the 2009 Undergraduate Poster Session and displaying materials for their departments are encouraged to contact Melinda Lowy of the APS Education Office (mlowy@the-aps.org; 301-634-7787). ❖



Undergraduate students discuss their research with APS members.



An undergraduate explains her research to APS President Hannah Carey.

Moving?

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

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

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 2008 in San Diego, CA were eligible to apply for the David S. Bruce Awards for Excellence in Undergraduate Research.

The award is named in honor of APS member David S. Bruce (1939 – 2000), who served as Chair of the APS Teaching Section and was a professor of physiology at Wheaton College from 1978-2000. Bruce was a dedicated physiology educator who had a particular interest in engaging undergraduate students in scientific research. Bruce not only encouraged and supported his students in participating in research, but he also regularly brought undergraduate students to the Experimental Biology meeting, often to present their research findings.

The APS Education Committee, chaired by Thomas Pressley, Texas Tech University Health Science Center, initially selected 20 finalists from a pool of 67 applicants. Finalists 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 20 finalists were:



APS President Hannah V. Carey with 2008 David S. Bruce Award Finalists.

Blair S. Ashley, College of William & Mary; Rachael C. Crnich, Colorado State Univ.; Matthew P. Dukes, Univ. of Mississippi Med. Center; Sara M. Freiberg, Univ. of Wisconsin, Madison; James Godfrey, Chapman Univ.; Marisa Goo, Univ. of California, Davis; Kristy M. Heppner, Univ. of Illinois at Urbana-Champaign; Sarah J. Jefferson, Pennsylvania State Univ.; Sumit Kar, Creighton Univ.; Lindsay M. Koepper, Villa Julie Coll.; Sarah K. Nelson, Univ. of Arizona; Thais G.C. Oliveira, Federal Univ. of São Paulo; Jessica R. Priestley,

Michigan State Univ.; Kent A. Riemondy, Univ. of Utah; Mark T. Sausen, Univ. of Delaware; Richa Sharma, Indiana Univ.; Ali Shawki, Univ. of Cincinnati; A. Caitlynn Taylor, Asbury College; Jennifer von der Heiden, Med. Univ. of South Carolina; and Victoria M. Youngblood, Univ. of New Mexico.

These students then made oral presentations of their posters to a subcommittee of Education Committee members and other APS members. Seven awardees were selected based on their knowledge of their research project. Each awardee received \$500 and a certificate of recognition. Awards were presented by Dr. Pressley and President Hannah V. Carey during a special APS Undergraduate Poster Session at EB 2008. The awardees were: Matthew P. Dukes, Sara M. Freiberg, James Godfrey, Marisa Goo, Kent A. Riemondy, A. Caitlynn Taylor, and Victoria M. Youngblood.

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

For information on applying for the 2009 David Bruce Awards, please see <http://www.the-aps.org/awards/student/bruce.htm>. ❖



APS President Hannah V. Carey with 2008 David S. Bruce Awardees.

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

Graduate students and postdoctoral fellows who were first authors on an abstract submitted to Experimental Biology 2008 in San Diego, CA were eligible to apply for the Caroline tum Suden/Frances A. Hellebrandt Professional Opportunity Award. The APS Women in Physiology Committee chaired by Jane F. Reckelhoff, at the Univ. of Mississippi Medical Center, selected 36 awardees from a pool of 110 applicants. For the first time, applicants were required to be APS members (either student or regular). Applicants were chosen based on the quality and novelty of their abstracts, and letters written by the candidates describing their career goals, research, and why they were particularly deserving of the award. Each awardee received \$500, a certificate of recognition, and complimentary registration for the EB 2008 meeting. Awards were presented during the APS Business Meeting. Awardees were:

James R. Austgen, Univ. of Missouri-Columbia
Sunanda Baliga, Rutgers Univ.
Andrea G. Bechtold, Univ. of California, Davis
Paulo S. Caceres, Henry Ford Hospital
Jessica Ann Clark, Washington Univ. School of Medicine
Sergio de Frutos García, Univ. of New Mexico
Jan Foster, Medical College of Georgia
Kim Parker Gannon, Univ. of Mississippi Medical Center

Jeffrey Stephen Gilbert, Univ. of Mississippi Medical Center
Romer Andres Gonzalez-Villalobos, Tulane Univ.

Health Sciences Center
W. Vallen Graham, Univ. of Chicago
Justin L. Grobe, Univ. of Iowa
Benjamin Lucas Hodnett, Univ. of Mississippi
Medical Center

David W. Infanger, Cornell Univ.
Hana A. Itani, Univ. of Iowa
Allison Kleiber, Univ. of Nebraska Medical Center
Erich Kushner, Univ. of Colorado, Boulder
Robert Lee-Young, Vanderbilt Univ.
Sarah Hoffmann Lindsey, Wake Forest Univ.

School of Medicine
David Andrew Low, Brunel Univ.
Paul J. Marvar, Emory Univ.
Eric E. Morgan, Univ. of Toledo College of Medicine
Nicole Louise Nichols, Wright State Univ.
Norma B. Ojeda, Univ. of Mississippi Medical Center
Jeffrey Peterson, Weill Cornell Medical College
Aaron James Polichnowski, Medical College of Wisconsin
Jennifer Leigh Rogers, Georgetown Univ.

Damian Gaston Romero, Univ. of Mississippi
Medical Center
Adeel Safdar, McMaster Univ.
Julio Sartori-Valinotti, Univ. of Mississippi Medical
Center



2008 tum Suden Awardees with Jane F. Reckelhoff, Chair of the APS Women in Physiology Committee (1st row, 2nd from right).

Jennifer Mayberry Sasser, Univ. of Florida
Ana Quenia Gomes da Silva, Univ.
Federal de Minas Gerais, Brazil
Alexis Netis Simpkins, Medical College of Georgia
Marcia Rossana Venegas-Pont, Univ. of Mississippi
Medical Center
Helen Elizabeth Wood, Univ. of Texas Southwestern
Medical Center
Huijing Xia, Louisiana State Univ. Health Sciences
Center

For information about applying for the 2009 tum Suden/Hellebrandt Awards, see <http://www.the-aps.org/awards/student/TumSuden.htm>. ❖

The American Physiological Society Medical Physiology Curriculum Objectives

<http://www.the-aps.org/education/MedPhysObj/medcor.htm>

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2008 APS/NIDDK Minority Travel Fellows Attend Experimental Biology in San Diego

The APS regularly awards Travel Fellowships for underrepresented minority scientists and students to attend APS scientific meetings with funds provided by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). These Fellowships provide funds for registration, transportation, meals, and lodging for travel to a meeting location, as well as complimentary meeting registration. Fifty-one Fellows attended the APS annual meeting, Experimental Biology (EB) in San Diego, California from April 5-9, 2008.

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

During EB, Fellows attended an orientation and reception on Saturday afternoon, a networking breakfast on Monday, and a luncheon on Wednesday. This year, the luncheon speaker was Patricia E. Molina, Louisiana State Univ. Health Sciences Center, New Orleans. Molina highlighted studies that show diversity in work environments improves the quality of research and APS's strategic directions to support underrepresented minority students. Her speech, "Diversity: Key to Success of Research Teams of the Future" allowed fellows to recognize their essential role in the increasingly global scientific community.

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 U.S. citizens or permanent residents. The specific intent of this award is to increase participation of pre- and post-doctoral minority students in the physiological sciences. For more information, contact Brooke Bruthers in the APS Education Office at 301-634-7132 or bbruthers@the-aps.org, or visit http://www.the-aps.org/education/minority_prog/index.htm on the APS website. ❖



A. Woodard-Grice, C. Richards-Williams and M. Steed at Experimental Biology 2008.

APS Travel Fellows at Experimental Biology 2008:

Adebowale Adebisi, Univ. of Tennessee HSC
Julio E. Ayala, Vanderbilt Univ.
Moradeke Bamgboye, Univ. of Maryland, Baltimore
Sharell M. Bindom, LSUHSC
Elizabeth L. Crittenden, Texas State Univ., San Marcos
Nildris Cruz, UPR-Medical Science Campus
Marielly Cuevas, Ponce School of Medicine
Kylie L. Davis, Univ. of North Dakota
Dolores F. Doane, Univ. of Illinois, Urbana-Champaign
John H. Dubinion, Univ. of Mississippi Medical Center
Jorge L. Gamboa, Univ. of Kentucky
Albert L. Gonzales, Colorado State Univ.
Helmut Bandeira Gottlieb, Univ. of the Incarnate Word
TanYa M. Gwathmey, Wake Forest Univ. School of Medicine
Kadine L. Hamilton, St. Lawrence Univ.
James E. Harris, Auburn Univ.
Lateira D. Haynes, Spelman College
Andres Hernandez, Auburn Univ.
Marcela Herrera, Henry Ford Hospital
Crystal D. Hill-Pryor, Medical College of Georgia
Michael Hoffman, Univ. of Wisconsin-Madison
Sandra Houser, Columbia Univ.
Cynthia Ann Jackson, Tuskegee Univ.
Brandiese E. Jacobs, Univ. of Maryland, Baltimore
Anna K. Leal, UT Southwestern
Exazevia Logan, Wake Forest Univ. School of Medicine
Elizabeth J. Luger, Univ. of North Dakota

Keisa W. Mathis, LSU Health Sciences Center
Matthew McGeachy, Louisiana State Univ. School of Vet. Med.
Miguel F. Molina, LSUHSC
Kimberly X. Mulligan, Vanderbilt Univ.
Juliana O. Odetunde, Univ. of Louisville
Norma B. Ojeda, Univ. of Mississippi Medical Center
Beatriz Pagan-Ortiz, Ponce School of Medicine
Elisha Peterson, Rush Medical College
Kristi M. Porter, Emory Univ.
José Quidgley, Univ. of Puerto Rico School of Medicine
Clintoria Richards-Williams, Univ. of Alabama, Birmingham
Zelieann Rivera, Univ. of Arizona
Edelmarie Rivera-De Jesús, Ponce School of Medicine
Ana E. Rodriguez, Univ. of Puerto Rico Medical Sciences
Jesus Salazar, Univ. of Michigan
Christopher L. Sandoval, Univ. of Wisconsin, Milwaukee
Olga I. Santiago, Ponce School of Medicine
Mesia M. Steed, Univ. of Louisville
Ann A. Tobin, Medical College of Wisconsin
Inimary Toby, The Res. Inst. Nationwide Children's Hosp.
Carmen M. Troncoso Brindeiro, Univ. of Nebraska Med. Ctr.
Johana Vallejo-Elias, Midwestern Univ.,
Arizona Osteopathic School of Medicine
Lizette Warner, Mayo Clinic
Vabren L. Watts, Meharry Medical College
Alencia V. Woodard-Grice, Univ. of Alabama at Birmingham
Jessica A. Clark, Washington Univ. School of Medicine

APS Meeting Mentors at Experimental Biology 2008:

Sean M. Wilson, Univ. of Mississippi School of Pharmacy
Evangeline D. Motley, Meharry Medical College
Johanna Krontiris-Litowitz, Youngstown State Univ.
Johana Vallejo-Elias, Midwestern Univ.,
Arizona Osteopathic School of Medicine
Declan F. McCole, Univ. of California, San Diego
David W. Rodenbaugh, Minnesota State Univ. Moorhead
David P. Brooks, GlaxoSmithKline Pharmaceutical
Curt D. Sigmund, Univ. of Iowa
Robert L. Hester, Univ. of Mississippi Medical Center
Donald G. Welsh, Univ. of Calgary
Michael J. Ryan, Univ. of Mississippi
Lourdes A Fortepiani, Univ. of Texas HSC, San Antonio
Ann A. Tobin, Medical College of Wisconsin
Gregory D. Cartee, Univ. of Michigan
Cynthia Ann Jackson, Tuskegee Univ.,
Robert G. Carroll, East Carolina Univ. School of Medicine
Patrice G. Guyenet, Univ. of Virginia Health System
Martin Frank, American Physiological Society
Liming Jin, Univ. of California, Davis
Brett Wong, Kansas State Univ.
Alan F. Sved, Univ. of Pittsburgh
Zachary M. Sellers, Univ. of Illinois, Urbana-Champaign
Dee U. Silverthorn, Univ. of Texas
Parimal (Perry) Chowdhury, Univ. of Arkansas for Med. Sci.
Rudy M. Ortiz, Univ. of California, Merced
Gina C. Schatteman, Univ. of Iowa
Marcela Herrera, Henry Ford Hospital
Jennifer C. Sullivan, Medical College of Georgia
Mark G. Clemens, Univ. of North Carolina at Charlotte
Susan M. Barman, Michigan State Univ.
Usha Raj, Harbor-UCLA Research/Education Institute
Nancy Pelaez, Purdue Univ.

Julio E. Ayala, Vanderbilt Univ.
R.K. Rao, Univ. of Tennessee Health Science Center
Douglas C. Eaton, Emory Univ. School of Medicine
Keshari Thakali, Univ. of Arkansas for Medical Sciences
Richard J. Paul, Univ. of Cincinnati College of Medicine
Helen E. Raybould, Univ. of California, Davis
School of Vet. Med.
Merry L. Lindsey, The Univ. of Texas Health Science Center
Joanna Floros, The Pennsylvania State Univ. College of Med.
Mingy Liang, Medical College of Wisconsin
Jane F. Reckelhoff, Univ. of Mississippi Medical Center
Chris Baylis, Univ. of Florida, Gainesville
Rolando E. Rumbaut, Baylor College of Medicine
& Michael E. DeBakey V.A. Medical Center
Patricia E. Molina, Louisiana State Univ. HSC



Travel Fellows at Experimental Biology 2008.



Minority Travel Fellows at the EB Luncheon.

Physiology Understanding Week Launched at EB 2008

"We have an obligation to transmit the excitement about science and physiology to students at all levels of education. PhUn Week is a great opportunity to become involved." - Irving Zucker, Presidential Address (1).

Plans and preparations for celebrating Physiology Understanding (PhUn) Week during the week of November 3 were launched at the PhUn Week Training Session at EB 2008, co-sponsored by the APS and ADInstruments. PhUn Week is the APS' annual, member-based outreach program to K-12 classrooms in local communities across the nation. In partnership with a teacher, APS members volunteer their time and expertise to engage students in hands-on interactive classroom activities. Members also share their life, career, and research experiences as physiologists. Typically, APS members and/or members of their laboratory or department visit a classroom anywhere from one hour to a full day, or even multiple days, during PhUn Week. The theme for 2008 again focuses on the physiology of exercise and fitness, but

APS members are welcome to focus on other areas of physiology. Downloadable resources and program information are available at <http://www.phunweek.org>.

Several participants in last year's PhUn Week events briefly presented their collaborations and visits to classrooms during the EB 2008 PhUn Week Training Session. Presenters on PhUn Week models and/or innovative activities developed from their local event included: David Holtzclaw of the Univ. of Nebraska Medical Center; Lisa Harrison-Bernard and Keisa Mathis of the Louisiana State Univ. Health Sciences Center; Catherine Uyehara of the Tripler Army Medical Center in Honolulu, Hawaii; Ana Rodriguez and Nildris Cruz of the Univ. of Puerto Rico Medical Sciences Campus; Clintoria Richards-Williams of the Univ. of Alabama, Birmingham; Diane Munzenmaier of the Medical College of Wisconsin; Frontiers Research Teacher Lorraine O'Shea and Van Doze of the Univ. of North Dakota School of Medicine and Health Sciences; Jessica Clark of the Washington Univ. in Saint Louis School of Medicine; and Barbara

Goodman of the Univ. of South Dakota Sanford School of Medicine.

A synopsis of feedback from the PhUn Week 2007 survey is summarized in Table 1.

Join your fellow APS members and reach out to a precollege classroom this fall to "transmit the excitement of science and physiology." Begin by finding and partnering with a teacher in your local community, and schedule a visit sometime during the week of November 3. Use the resources available at the APS' PhUn Week website (<http://www.phunweek.org>), and submit your PhUn Week Event Planners no later than October 1 to request free promotional, give-away items. Quantities of the promotional freebies are limited and provided on a first-come, first-served basis. For other information, contact Mel Limson in the APS Education Office at mlimson@the-aps.org. ❖

References

1. Zucker, I.H. "Through the Looking Glass: The Future of Physiology. Passion, Responsibility and Morality in Science." *The Physiologist*. 51:49-56, 2008.

Table 1. Synopsis of feedback from PhUn Week 2007 Survey.

Aspects most valuable for students	Perception of scientists changed with a "real-life" encounter, and a realization of self-potential to become a scientist Identifying and making connections with one's health/body with physiological systems Learning different aspects of scientific research
Aspects most valuable or challenging for teachers	Establishing a connection with local research scientists Providing enthusiasm for their students and for themselves Enriching the content of their curriculum and the application of scientific skills
Aspects most valuable or challenging for scientists	Learning how to explain scientific concepts at the grade-appropriate level within the time limits Satisfaction of student responses, interaction, and feedback Collaborating with the teacher in preparing for the classroom visit
The reasons for getting involved with PhUn Week:	Enjoyment and satisfaction in working with children through outreach programs Professional duty for scientists to encourage the next generation into possible careers in science
Students' level of engagement	Hands-on, interactive activities and demonstrations are most effective Presentations are respected, but not completely engaging Identifying and making connections with one's health/body with physiological systems
The theme of exercise and health	A relevant and identifiable topic engages students in making connections for learning
The process of planning the week and/or the visit by the physiologist team	Organization, communication, and flexibility are key assets Preparation of students by teacher is important

2007 Frontiers in Physiology Research Teachers and Hosts Honored at EB 2008

Fifteen Research Teacher (RT) Fellows and their APS member Research Hosts in the year-long 2007 Frontiers in Physiology Professional Development Fellowship were honored at a luncheon at EB 2008. Also honored were the Physiologists-in-Residence: Joey Benoit (University of North Dakota), and Clintoria Richards-Williams and Jessica Clark (2007 K-12 Minority Outreach Fellows); and the Mentor/Instructors who were past RTs: Charles Geach (Texas), Margaret Shain (Indiana), and Tonya Smith (South Carolina).

The RTs concluded their fellowship year by experiencing this scientific meeting, participating in the Physiology for Life Science Teachers and Students Workshop, and attending the Physiology Understanding Week Training Session (see related stories in this issue). Two RTs, Erin O'dya (Indiana, with C. Subah Packer, Indiana Univ. School of Medicine) and Lorraine O'Shea (North Dakota, with Van Doze, Univ. of North Dakota School of Medicine), presented their summer research project during poster sessions.

In addition to the RTs' 7-8 week research experience with their Research Host last summer to learn first-hand how the research process works, they attended the "APS Science Teaching Forum," an intensive workshop week focused on student-centered teaching methods at the Airlie Center in Warrenton, VA. The Mentor/Instructors and the PIRs facilitated sessions using



The 2007 Mentor/Instructors for the Frontiers program enjoy their role in leading the professional development program for the RT Fellows throughout the year. From left to right: Tonya Smith, Margaret Shain, and Charles Geach.

APS curriculum units and explored inquiry- and equity-based teaching strategies, while integrating technology into their classroom, and addressing equity and diversity in science education. Last fall, the RTs developed and enhanced their own inquiry-based lab activity for the science classroom, as well as completed online assignments for this fellowship.

The Frontiers in Physiology program is designed to create ongoing working relationships between research scientists and middle/high school teachers via research and inservice experiences. Additionally, the program promotes the adoption of national standards for K-12 content and pedagogical techniques

among middle and high school science teachers through ongoing inservice activities developed collaboratively by teachers and physiology researchers.

Frontiers in Physiology is a program of APS, and is sponsored by the APS, the National Center for Research Resources and the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health. A newly launched website for the Frontiers in Physiology program is available at <http://www.frontiersinphys.org>. For additional program information, or if you are interested in hosting a teacher next summer, email Mel Limson in the APS Education Office (mlimson@the-aps.org). ❖



The 2007 RT Fellows celebrate the culmination of their year-long fellowship program with the APS at an awards luncheon honoring them and their APS member Research Hosts.

High School Students and Science Teachers Explore Physiology at EB 2008

More than 90 San Diego area teachers, their students, and the 15 2007 Frontiers in Physiology Fellowship Research Teachers (RTs) actively participated in the Physiology for Life Science Teachers and Students Workshop at EB 2008. The day-long workshop included a keynote presentation, a careers panel discussion, a tour of posters and exhibits, and hands-on physiology workshops for students and teachers.

Education Committee Chair Thomas Pressley, Texas Tech Univ. Health Sciences Center, and committee member Robin Looft-Wilson, College of William and Mary, coordinated the day's events. During the registration period in the morning, past and current APS K-12 Minority Outreach Fellows welcomed the groups of students and teachers. Mesia Steed (2006), Univ. of Kentucky, Clintoria Richards-Williams (2007), Univ. of Alabama, Birmingham, Keisa Mathis (2008), Louisiana State Univ. Health Sciences Center, and TanYa Gwathmey (2008), Wake Forest Univ. School of Medicine, each briefly introduced themselves, described their academic careers and interest in research, and provided words of mentoring for the high school students. In the background, the "Physiology: The Science of Life" slideshow presentation for high school students was automatically running as a preview to the field of physiology and careers in physiology. The presentation was developed and produced by the Careers Committee and is available for



Career panelists shared their experience in becoming a physiologist. From left to right: Pawelczyk, Rudy Ortiz, Cathy Uyehara, and Yolanda George (facilitator).

download at:
<http://www.phun-week.org/pages/phun06a.shtml>.

The keynote presentation, "Human Physiological Limits to Exploring Mars," was given by APS member, James Pawelczyk of Penn State University. He concluded his presentation by challenging the students that they could be the scientists involved in preparing for the mission to Mars over the next 25 years.

Pawelczyk was then joined by a Careers Panel that included APS members Rudy Ortiz of the Univ. of California, Merced, and



APS member Keith Jackson engages students in designing the rate flow experiment, while Councillor Barbara Goodman monitors the student groups.

Catherine Uyehara of the Tripler Army Medical Center in Honolulu, Hawaii. The panel was moderated by



James Pawelczyk explains the mission to Mars and the need for understanding human physiological limits to space exploration.



APS 2008 K-12 Outreach Fellow and Porter Fellow Keisa Mathis (left) guides students in performing their experiment to test rate flow.



Education Committee member Dexter Speck and Early Career Award winner Diane Munzenmaier mentor a student group as they record experimental data.



Students setting up an experiment to test the effect of the radius of a tube on flow rates.

Yolanda George, Deputy Director and Program Director of Education and Human Resources Programs at the American Association for the Advancement of Science. The panelists shared their earliest experiences of doing science and continuing on as researchers through mentorship and opportunities presented to them.

Sixteen APS members served as tour guides during lunch where they took teachers and students through the exhibits and posters at the San Diego Convention Center, and shared a box lunch while discussing physiology careers.

The afternoon student session was led by Looft-Wilson with assistance from

Councillor Barbara Goodman of the Univ. of South Dakota, Dexter Speck and Jeffrey Osborn of the Univ. of Kentucky, Susan Barman of Michigan State Univ., Tom Ecay of East Tennessee State Univ., Keith Jackson of the Univ. of Louisiana at Monroe, Diane Munzenmaier of the Medical College of Wisconsin, Sandrine Pierre of the Univ. of Toledo, Jennifer Uno of Univ. of North Carolina, Chapel Hill, and K-12 Outreach Fellows Jessica Clark, Washington Univ., Clintoria Richards, and Keisa Mathis. Students used the "Elvis Experiments" from the APS "Physiology of Fitness" unit to learn about factors affecting flow of liquids

through tubing (radius, length, viscosity).

While students were conducting their experiments, their teachers and the 2007 RTs participated in a workshop activity on modeling the digestive system with common household items. Frontiers Mentor/Instructor Tonya Smith (South Carolina) led the teacher workshop.

As in the past, feedback from both teachers and students was very positive and students were especially excited to meet physiologists one-on-one. The Education Committee is planning to continue the program in 2009 in New Orleans. ❖



Teacher participants and 2007 RTs participate in a teacher-developed activity (Diana Hill, 2002 RT Fellow) on digestion. The groups model how crackers are processed from the mouth through excretion using juice, funnels, filters, zippie bags, pantyhose, and duct tape.



Granger Receives Schmidt-Nielsen Distinguished Mentor and Scientist Award

The APS Women in Physiology Committee hosted a reception at Experimental Biology 2008 to honor Joey P. Granger, Billy S. Guyton Distinguished Professor, Professor of Physiology and Medicine, and Dean of the School of Graduate Studies in the Health Sciences at the University of Mississippi Medical Center, who was selected as the fifth recipient of the Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award.

More than 100 trainees, EB awardees, and colleagues gathered to celebrate the award and hear Granger's award lecture entitled, "Mentoring: A Lifelong Process." 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>). B. Babbette D. LaMarca (University of Mississippi Medical Center), who coordinated the nomination of Granger for the award, was present to introduce him. The award was presented to Granger by Siribhinya Benyajati, Past Chair of the Women in Physiology Committee; Hannah V. Carey, President of the APS; and Irving Zucker, President-elect of the APS.

Granger received his PhD at the University of Mississippi Medical Center. He did his postdoctoral training at the Mayo Clinic and Foundation before being hired as an Instructor and then Assistant Professor in the Department of Physiology and Biophysics. He then moved to Eastern Virginia Medical School in Norfolk, VA where he served as an assistant professor and then was promoted to associate professor. In 1990 he moved to his current institution, University of Mississippi School of Medicine, where he was named Professor of Physiology and

Biophysics. In 1996, he became the Associate Director of the Center for Excellence in Cardiovascular-Renal Research. He was named the Billy S. Guyton Distinguished Professor in the Department of Physiology and Biophysics in 2004. In 2006, he was named Interim Dean of the School of Graduate Studies in the Health Sciences and was appointed Dean in 2007.

Granger has successfully mentored five visiting scientists, 13 postdoctoral fellows, and 10 predoctoral students, many of whom are from outside the US. His mentees have gone on to successful and prominent positions (one departmental chair, one associate professor, and four assistant professors, among others) with national funding and numerous awards among themselves. In addition, Granger has had 16 medical and undergraduate student research fellows in his lab, which included two APS

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faculty in his department to help them obtain funding. To foster early interest in scientific research, Granger established a summer research internship program for undergraduate students in his department and served as an active judge for local science fairs as well as a frequent speaker at local high schools. As a recent dean of Graduate Studies, Granger improved graduate education by providing better stipend and health insurance support for all graduate students at his institution. APS congratulates Dr. Granger on this well-deserved honor.

APS members are encouraged to nominate members for the 2009 Bodil Schmidt-Nielsen Award. For more information, see the APS website (<http://www.the-aps.org/awards/society/schmidt-nielsen.htm>). Application deadline is September 15, 2008. ❖



APS President Hannah Carey presents the Bodil Schmidt-Nielsen Distinguished Mentor Award to Joey P. Granger, along with President-elect Irving Zucker.

Position Advertisements Online and in *The Physiologist*

The American Physiological Society is pleased to make its Career Opportunities Web page available to the physiological community as a career resource. Ads are accepted for either positions available or positions wanted under all categories. The charges for this online listing according to time length are:

Members: 30 days \$100; 60 days \$150; 90 days \$200;

Non Members: 30 days \$175; 60 days \$225; 90 days \$275.

All ads are posted within a week of receipt. In addition, positions listed on this page are also published in *The*

Physiologist on a one-time basis, as a free service. *The Physiologist* is sent to over 10,000 members and subscribers.

If you would like to have your ad listed on the APS Career Opportunities Web page, the following items must be included for ads to be processed: a copy of the ad, the name of a contact person, and either a credit card number (with expiration date and name of cardholder) or a purchase order number and billing address. Send the information to Esther Samuel (Email: esamuel@the-aps.org; Tel.: 301-634-7927; Fax: 301-634-7241).

APS Presents Awards to Outstanding High School Students at the 59th Annual International Science and Engineering Fair

The 59th Annual Intel International Science and Engineering Fair (ISEF), presented by Agilent Technologies, was held in Atlanta, GA May 11-16, 2008. Nearly 1,500 students from 50 countries, and territories competed in the world's largest pre-college science competition. During the two evenings of ceremonies, over \$4 million in scholarships, prizes, and awards were distributed in categories ranging from behavioral science to engineering and medicine. More than 500 Intel ISEF participants received scholarships and prizes for their work. Prizes included scholarships, cash awards, scientific field trips to foreign countries and the grand prizes: three \$50,000 scholarships from Intel. Grand awards included 18 "Best of Category" winners who each received a \$5,000 Intel scholarship and a new laptop. Special Awards are presented by over 70 scientific, professional, and educational organizations.

For the 13th year, the APS presented four Special Awards in the form of cash prizes, certificates and student subscriptions for the best projects in the physiological sciences. This year's APS judging team included L. Britt Wilson, Robert Hester, Doug Eaton, Otto Froehlich, Peter Wenner, and Wylie Nichols.

The convention center was packed with poster projects ranging from physiology-based research done at home or at medical schools, to complex robotics with computer driven controls. Students spent two days being interviewed by judges, and participated in a panel discussion featuring Nobel Laureates. As judges, we previewed almost 100 proj-

ects to select 22 that best fit the category of "physiology." We interviewed each of these finalists to evaluate their involvement in the project and to determine their understanding of the science and experimental design behind the project. After two days of interviews, we chose the following projects to receive APS awards for excellence in physiological research.

Receiving \$1,000 and first place was Harrison Phu Nguyen, 17, Detroit Catholic Central High School, Novi, MI for his project entitled "Combating Muscle Atrophy: A Novel Study of Myofibril Turnover in *Sternopygus macrurus*." His work studied the behavior of the protein MuRF-1, which mediates atrophy. Harrison demonstrated that MuRF-1 is more prevalent in slow-twitch muscle fibers than in fast-twitch and is more abundant around the outside of cells. Harrison displayed the enthusiasm and desire of a young bench scientist. He was also awarded a best of category winner for Cellular & Molecular Biology receiving a fourth place award and \$500. He also received a \$1,500 second place award from the United States Air Force.

Second place and a \$500 award went to Diya Dwarakanath, 17, Westview High School, Portland, OR for her project entitled "Role of Calcium/Calmodulin-dependent Protein Kinases in BDNF-induced AMPA Receptor Surface Trafficking." Her work examined the neurotrophic pathway on how Brain Derived Neurotrophic Factor (BDNF) activates AMPA receptor trafficking. She proposes that this work will lead to a better understanding of diseases involving synaptic plasticity abnormalities.

Dallas Krentzel, 17, of Airline High School in Bossier City LA was awarded one of the two third place awards (\$500) for his project entitled "Is 4,4' Methylene-dianiline-Induced Vascular Toxicity a Model for Pulmonary Hypertension?" Dallas' work focused on 14,4'-Methylene-dianiline (DAPM) which is a compound used in the production of polyurethane. Dallas



APS members who served as Special Awards judges at the Intel ISEF. Pictured from left to right: Robert Hester, Otto Froehlich, Britt Wilson, Wylie Nichols and Peter Wenner. Doug Eaton not pictured.

demonstrated that exposure to DAPM resulted in smooth muscle proliferation in pulmonary arteries and veins.

Third place was also awarded to Jourdan Urbach, 16, of Roslyn High School in Roslyn Heights, NY. Jourdan's work, entitled "The Effect of Extracellular Signaling Molecules on Oligodendrocyte Differentiation, Morphology, Proliferation, and Survival." Jourdan analyzed the proliferation, survival, maturation, and morphology of oligodendrocytes exposed to laminin and various immunocytokines. He found that oligodendrocytes exposed to laminin and immunomodulators differentiated at a rate greater than interferon-Beta, a current treatment for Multiple Sclerosis. Jourdan was also awarded a Tuition Scholarship ranging from \$6,000-\$9000 from the University of the Sciences in Philadelphia. He also received a third place award of \$150 from the Patent and Trademark Office Society.

The winners also received an APS certificate, a t-shirt, and a one-year subscription to APS publications.

These winners are a small sample of the many outstanding projects we had the opportunity to judge. The finalists at the fair were outstanding students and were extremely knowledgeable about their projects. The Intel ISEF is a wonderful event and I was honored to represent APS at this celebration. ❖

Robert L. Hester
Univ. of Mississippi
APS Education Committee



The winners of the APS Special Awards at the 2008 Intel ISEF. Pictured from left to right: Jourdan Urbach, Dallas Krentzel, Harrison Phu Nguyen, and Diya Dwarakanath with Lead Judge, Robert Hester.

For more information on the APS annual awards at ISEF, visit: <http://www.the-aps.org/education/isef/>.

APS Presents Awards for the Best Physiology Project at Local School Science Fairs

APS members continue to judge and present Science Fair Awards for the best physiology project at local or regional science fairs for precollege students. Each student receives an APS "Physiology: Life, Logic Study" t-shirt, an APS researcher pin, and a certificate for the best physiology project. The student's teacher receives the "Women Life Scientists" book and a K-12 resource packet.

Ann Cooper, a junior at Lafayette High School who previously received an award for the best physiology project at Intel affiliated Regional Science and Engineering fair in Lexington, KY also won a second place award at the 59TH Annual Science and Engineering Fair in Atlanta, GA. Animal Sciences presented her with a \$1,500 award for her project titled, "The Effects of Serotonin on Circadian Patterns and Behaviors in *Drosophila*."

As of April 2008, the following elementary, middle and high school students have received the APS Science Fair Award as judged by an APS member in their local community:

Morgan Dieckmann, a sixth grade student at Prince of Peace Lutheran School in Cedar Crest, NM received an APS award for the best physiology project at the Annual Central NM Science & Engineering Research Challenge. Morgan is the first elementary student to receive a science fair award packet from the APS. APS member Jay Naik of New Mexico Tech was a judge on behalf of the APS and presented Morgan with an award. The title of Morgan's project is "Changes in CO₂ Output."

Thomas Myslinski, a seventh/eighth grade student at St. Bernadette Elementary received an APS award for the best physiology project at the North Ohio Science and Engineering Fair. The title of his project is "Body Levers." APS member Cassandra Talerico of Cleveland Clinic was a judge on behalf of the APS and presented Thomas with his award.

Emily Singer, a fifth grader at Sparks Elementary School received an APS award for the best physiology project at her school's science fair in Sparks, MD. The title of her project is "Let's Give the Earth a Faucet to Drink From!" Emily will now go on to the Baltimore County STEM Fair Competition against students from all the other Baltimore

Congratulations to Winners of the 2008 APS Local and Regional Science Fair Awards



APS President Irving H. Zucker (center) and Viswanatha Rajagopalan (left) present an award to Darius Rahrnlow (right) at the Eighth Grade Science Meet in Nebraska.



APS Councillor J. Michael Wyss presents an award to Venetra King at the Central Alabama Regional Science and Engineering Fair.



Stephanie Simpson receives an APS award for best physiology project at the Central Indiana Regional Science Fair by APS members Steven J. Miller and C. Subah Packer.



APS Member Parimal Chowdury presents an award to Yi Wu of Little Rock Central High School.

County Public Schools. Emily's teacher is Elizabeth Fair. APS member Bradley McConnell of the University of Maryland, Baltimore was a judge on behalf of the APS and presented Emily with her award.

Darius Rahrnlow, an eighth grader at Mission Middle School in Bellevue, NE received an APS award for the best physiology project at the Eighth Grade

Health Science Meet conducted at the University of Nebraska Medical Center. The title of his project is "Music and Effects on the Human Body." His teacher and sponsor is Susan Hester. APS President Irving H. Zucker and Viswanathan Rajagopalan of The University of Nebraska Medical Center were judges on behalf of the APS and presented Darius with his award.



APS member Merry Lindsey (center) presents an award to Nayana Ghosh-Choudhury (right) at the Alamo Regional Academy of Science and Engineering Science Fair in San Antonio, TX.



Ashlei Peterson of Rockwood Summit High School receives an APS award for best physiology project judged by APS member Jessica Clark of St. Louis, MO.



Ann Cooper (left) with her teacher Jeanne Robinson (right), receives an award for best physiology project judged by APS member Robin Cooper of the University of Kentucky.

Tyler Kirsch, a freshman at City Honors School, received an APS award for the best physiology project at the Western New York Science Congress. The title of Tyler's project is "Alignment and Analysis of the CAG Subset in SCOR Enzymes." His teacher and sponsor is Dean Johnson. APS member Mary Ann Rokitka from the University of Buffalo was a judge on behalf of the APS and presented Tyler with his award.

Ashlei Peterson, a senior at Rockwood Summit High School in Fenton, MO received an APS award for the best physiology project at the Honor's Fair. The title of Ashlei's project is "The Effects of Breast Cancer on Women and Their Children." Her teacher and sponsor is Cheryl Apperson. APS member Jessica Clark of Washington University School of Medicine was a judge on behalf of the APS and presented Ashlei with her award.

Any APS member who participates as a judge in a local or regional science fair at an elementary, middle, or high school is eligible to apply and receive an APS award packet. For more information, visit <http://www.the-aps.org/education/sciencefair> or contact Scarletta Whitsett (swhitsett@the-aps.org) in the APS Education Department. ❖

2008-2009 Porter Physiology Fellows Announced

The APS and Porter Physiology Development Committee congratulate the 2008-2009 APS Porter Physiology Fellows:

Heidy, L. Contreras, Univ. of California, Irvine
Dolores F. Doane, Univ. of Illinois at Urbana-Champaign
Anna K. Leal, UT Southwestern
Natasha Lugo-Escobar, Univ. of Puerto Rico
Miren J. Maiz, UCLA
Keisa W. Mathis, LSU Health Sciences Center
Zelieann Rivera, Univ. of Arizona
Lizette Warner, Mayo Clinic

Keisa Mathis was named the 2008-2009 Merck Fellow in honor of Merck & Co., Inc., a Porter program contributor, highlighting the fact that she had the highest ranked application of all the new applicants to the program. Dolores Doane, was named the 2008-2009 Eleanor Ison-Franklin Fellow in honor of Dr. Franklin, the past Co-Chair of the Porter Committee,

indicating that she had the highest ranked application among the renewal applicants.

The Porter Physiology Fellowships for minorities are one-year fellowships that provide a stipend of \$20,772. The fellowships are open to underrepresented ethnic minority applicants (African Americans, Hispanics, Native Americans, Native Alaskans, or Pacific Islanders) who are citizens or permanent residents of the United States or its territories. Applicants must have been accepted into or currently be enrolled in a graduate program pursuing an advanced degree in the physiological sciences.

For more information, see the APS website at http://www.the-aps.org/education/minority_prog/stu_fellows/porter_phy/ov_pp.htm or contact Brooke Bruthers in the APS Education Office at education@the-aps.org or 301-634-7132. The deadline for 2009-2010 applications will be **January 15, 2009.** ❖

How to Choose a Mentor

Jane F. Reckelhoff
University of Mississippi Medical Center

Choosing a mentor is something that, as a scientist, you will do many times throughout your professional life, regardless of your scientific career stage or what career path you choose. What a mentor is, what a mentor does for you, what responsibilities the mentor has to you, what responsibilities you have to the mentor, and ethical considerations regarding the mentor/mentee relationship are subjects that will be discussed. The discussion will focus mainly on information needed by graduate students and postdoctoral fellows in choosing appropriate mentors.

What is a mentor?

The dictionary definition of a mentor is “an experienced and trusted advisor,” “trusted counselor, guide, tutor or coach,” or a “person who imparts wisdom.” The term “mentor” traces back to the *Odyssey* of Homer in which the goddess, Athena, assumed the form of Odysseus’s friend, Mentor, who was entrusted with the education of Odysseus’ son, Telemachus.

Throughout your career, you will choose many mentors. Mentors will change depending on your career level, the career path you have chosen, and the specific area of counseling you need.

For example, as a new graduate student, you will choose a mentor who is likely to be a graduate advisor, research advisor, and thesis advisor. In this case, the mentor will provide advice in several areas, such as teaching you how to perform research, how to keep scientific records, how to observe ethics in research, how to make oral and written presentations of your work, and how to choose a postdoctoral position. The mentor will also foster your socialization with peers, particularly in the laboratory environment. In addition, the mentor may teach you how to interact with colleagues at scientific meetings, including what is appropriate dress and behavior for scientific meetings, and may introduce you to colleagues to help you begin the networking process that is so important in a scientific career. Alternatively, you may choose more than one mentor to advise you on these different areas of your career.

As a postdoctoral fellow, you will



Jane F. Reckelhoff

choose a mentor with whom you can perform research, but also someone to assist you to learn how to write research proposals, including research grants. A mentor can also help you to obtain a position after completion of your postdoctoral fellowship, whether it is an industry position, an academic position, or a non-traditional position. This may be the same person as your postdoctoral advisor or another scientist whose work you respect.

As a young independent scientist, you will choose a mentor who can guide you through the early start-up of your laboratory, writing your first independent Federal or foundation grant proposals, or learning what is expected of you and how to perform in a industry position. These mentors may be the same as those who have advised you as a graduate student or postdoctoral fellow or the mentor may be a new individual. In academics, as an assistant professor, you will also seek a mentor to help you with promotion and tenure issues. The mentor may also be proactive in suggesting additional funding agencies for grant submissions, such as young investigator grants or established investigator grants with which you may not be familiar or not be sure you are qualified to receive. The mentor may also help to promote you in your scientific society, such as by nominating you for society awards, committee service, and/or proposing you as a speaker in society meetings.

As a senior scientist, you may ask a mentor for advice on how to be head of a study section, journal editor, chair, dean, provost or president of a university, or

CEO of a pharmaceutical company.

Therefore, mentors are important at all stages of your career. The mentors that you have relied on in the past may continue to be mentors in the future, but likely new mentors will be found as your career progresses and needs change. A mentor will serve as an advisor, a confidant, and a critic. Mentoring is a dynamic process and works best one on one.

What a mentor is not

A mentor is not merely the person who provides money for research to be performed. This person, called a “patron” during the Renaissance, provided money to the artists of the time, exemplified by the de Medici family for Leonardo Da Vinci, but had little interaction with them on a personal or professional level. A mentor is not just a supervisor or one who oversees the dissertation or the research in the laboratory. A mentor is also not just someone who only serves as a link between the institution, the academic administration, its rules, and you. Finally, a mentor is not just a role model. However, a true mentor can be, and often is, all of these things.

What are the characteristics of a successful mentor/mentee relationship?

The characteristics of mentor/mentee relationships will vary depending on the personalities of you and your mentor and your respective needs. Similar research interests and/or work styles may promote good relationships. However, one of the key characteristics of a successful mentor/mentee relationship is trust. You have to be assured that the mentor has your best interests at heart, and that what you tell the mentor will be kept confidential. As such, the relationship between your mentor and you is exclusive and will outlive the time spent in formal training. Mentors are also often judged in light of the success of their former trainees, so your success will be important to your mentor.

The mentor may become a personal friend of yours, but this is not necessarily so, especially if you are a graduate student or postdoctoral fellow. More importantly, you and your mentor must

have respect for each other and exhibit professional courtesy toward each other. There are research advisors at the graduate student or postdoctoral fellow level who do not have the personality to be a mentor outside of the bare minimum to direct research, help with manuscript preparation, and ensure minimal presentation skills. In that case, you must then find other mentors to meet your needs, either within your department or university, or perhaps via national mentoring centers, such as MentorNet.

To facilitate a strong mentor/mentee relationship, your mentor must clearly communicate his/her expectations for you. The boundaries in the relationship must be clearly stated at the outset and be consistent with each interaction. Because your mentor provides constructive criticism, the mentor must clearly explain the reasoning behind decisions that affect you, in order to allay any fears that could erode the mentoring relationship.

Finally, you and your mentor should adhere to the ethical rules accepted by the scientific community. In fact, if your mentor is also your graduate or postdoctoral advisor, then he/she will be responsible for teaching you ethical skills in various areas, such as research methods, scientific record keeping, peer reviewing, and writing. Ethics within the mentor/mentee relationship will be discussed more in detail below.

Considerations in selecting a mentor

As a graduate student and postdoctoral fellow, you will select a mentor who has similar research interests. The mentor should have a strong publication record and have current extramural research funding in order for you to learn how to be a successful scientist in a very competitive scientific community. Ideally the mentor should have national recognition.

Often graduate students or postdoctoral fellows do not choose junior faculty for mentors because they are less well known. However, if the junior faculty member is extramurally funded and was well-trained, the choice of a junior faculty member as a mentor is often beneficial for both of you. The junior investigator may have more time for mentoring than a senior investigator who may delegate interactions with you to senior technicians or postdoctoral fellows in the laboratory.

Consideration of a mentor should

include university rank and tenure status. In addition, you should be cognizant of the proximity to retirement of a senior investigator, since the mentor may be slowing down his/her laboratory efforts as retirement approaches, with the caveat that senior scientists, even those who are slowing their research efforts, make excellent mentors due to their considerable experience.

Finally, as a graduate student or postdoctoral fellow, you should choose a laboratory in which the number of other graduate students or fellows is small enough to foster consistent, on-on-one interaction with the mentor rather than a surrogate, such as a senior postdoctoral fellow or laboratory manager. Another consideration in selecting a mentor is the current positions of former mentees, since one mark of a mentor's success is perceived to be the success of former students/trainees.

Another important consideration in choosing a mentor is the mentor's personality. You should seek out information from current or previous mentees regarding their interactions with a potential mentor. Questions that should be asked include, is the mentor approachable; how does the mentor manage the laboratory; does the mentor have an "open door" policy with mentees or does the mentor require preset appointments for discussions; does the mentor have a reputation for recognizing the mentees' accomplishments rather than taking credit for them by him/herself; does the mentor promote mentees with other investigators, grant-writing agencies, scientific societies?

Responsibilities of the mentee to the mentor

Within a mentor/mentee relationship, you should act in a mature and ethical manner, being cognizant of the mentor's time constraints and professional demands. Honesty is a major component in the mentor/mentee relationship for both parties. You should maintain open communication with your mentor, and be proactive in your training and education, seeking out the mentor for advice instead of waiting for the mentor to come to you. This said, you should devote appropriate time and energy to achieving academic excellence, such as being familiar with the scientific literature important in your field of research, developing technical skills to be able to perform the experiments, work to develop oral and written communication

skills, and finally, with time and experience, learn to design experiments. You should also recognize that the mentor has a responsibility to monitor the integrity of the research, writing, and presentations.

Ethical issues in mentoring

The mentor/mentee relationship should adhere to the highest level of ethics and integrity. Unfortunately, because you are dependent on your mentor for such things as research funds, salary support, successful completion of a thesis project, or future positions in academics, abuses of power can occur. These can take the form of acts of commission or omission and run the gamut from minor abuses, such as not providing enough time for interaction with you, to more egregious behavior, such as prolonging thesis work to foster the mentor's agenda, or even sexual harassment. For lesser problems with the mentor, you should discuss the situation with the mentor in a non-confrontational way. If you do not get satisfaction, you have recourse to the department chair and eventually to the dean of the graduate program if you are a student. For more flagrant violations, there will be a grievance committee at the university that will protect your confidentiality to which you can appeal for help.

Women and mentors

Several studies have found that women are less likely to have adequate mentoring relationships than men, and do not ask advice from professors as often as men. This may have been due in part to the low numbers of women fac-

Jane F. Reckelhoff is a Professor in the Department of Physiology at the University of Mississippi Medical Center in Jackson, MS. She received a BS in Chemistry from the College of William & Mary, and a PhD in Biochemistry from the Medical College of Virginia/Virginia Commonwealth University in 1985. She did two postdoctoral fellowships, one at the University of Texas HSC in Dallas and the other at West Virginia University. In 1991 she received her appointment as Assistant Professor in the Department of Physiology & Biophysics at the University of Mississippi, followed by tenure and promotion to Associate Professor in 1996 and full professor in 2001. She is the current Chair of the APS Women in Physiology Committee.

ulty in the past, to discomfort with a man as a mentor, or due to discomfort on the part of women to ask for advice. However, this situation has been alleviated somewhat by the increased numbers of women faculty. For whatever reasons, women have not availed themselves of mentors in the past. Therefore, it is imperative that women realize that having a mentor at every level of their careers is imperative to becoming a successful scientist.

Summary

Mentors will play important roles in the careers of most successful scientists. Mentors are trusted advisors that give

constructive criticism and provide information in many areas of a scientific life. Mentors will likely change throughout your career as your position changes and thus the areas of advice needed changes. Despite the fact that you gain new mentors, the relationships with the old mentors likely will continue and often grow into strong friendships.

The American Physiological Society is a member of MentorNet, which is an award-winning, free, one-on-one electronic mentoring program for graduate students, postdoctoral fellows, and early career scientists who are APS members. Mentees and mentors are matched based on their responses to several

questionnaires regarding research interests, mentoring needs, time needed, etc. Once assigned, mentors and mentees are allowed to approve their matches, and once done, contact information is given to each pair. A new mentor can be assigned every eight months. These electronic mentoring relationships are especially helpful if you are not comfortable discussing certain things with your thesis or postdoctoral advisor. APS encourages all members to participate either as a mentee or mentor in this valuable program.

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

2009 Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award

Applications due September 15, 2008

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

The award was established to recognize Dr. Bodil M. Schmidt-Nielsen, the first woman President of the Society and a distinguished physiologist who has made significant contributions in her field. The award of \$1,000 and a commemorative plaque will be presented at the annual Experimental Biology meeting where the awardee will meet with APS members and young scientists and give a talk on mentoring. The awardee

will also write up the talk for publication on the web and/or in *The Physiologist* and will receive reimbursement of expenses incurred in association with the delivery of the talk at the Experimental Biology meeting. The first award was made at EB 2004.

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

A letter stating the basis for nomination with a synopsis of the nominee's scientific contributions and mentoring skills and evidence related to the criteria, such as: assisting students with research funding or job placement; success of graduates, publications and presentations of graduate students; providing psychological support, encouragement, and essential strategies for life in the scholarly community; continued interest in the individual's professional advancement; participation in graduate education activities; successful role model; teaching awards; descriptions of innovative teaching methods, etc.

A list of current and former trainees (undergraduate, graduate, postdoctoral fellows, clinical fellows, and junior faculty), training dates, and their current positions and any award they received.

Support letters - successful nominations usually contain 8-10 letters. No more than 3 letters can be from colleagues, with the remainder from current or former trainees. Trainee letters should be from a variety of institutions. No more than 10 letters can be submitted.

Nominee's current curriculum vitae, including current and past grant support information.

The nomination packet should be submitted by the nominator.

Nominations are due by **September 15**. All nominations must be submitted online at <http://www.the-aps.org/awards-dapps>. For more information, see <http://www.the-aps.org/awards/society/schmidt-nielsen.htm>. For question and recommendations of competitive nomination packet contents, contact Melinda Lowy, APS Education Office at mlowy@the-aps.org or 301-634-7787. ❖

New Regular Members

*Transferred from Student Membership

- Diane S. Allen-Gipson**
Univ. of Nebraska
- Pablo Artigas**
Texas Tech Univ.
- Jonathan Ball**
St. George's Hosp., London, UK
- Matthew N. Bartels**
Columbia Univ., NY
- Steven Alfred Bloomer***
Univ. of Pennsylvania
- Adriana Darielle M. Briscoe**
Univ. of California, Irvine
- Patricia Chakur Brum**
Univ. of Sao Paulo, Brazil
- Nenad Bursac**
Duke Univ., Durham, NC
- Peter Andrew Cattini**
Univ. of Manitoba, Canada
- Samuel K. Chacko**
Univ. of Pennsylvania
- James Richard Churilla***
Univ. of North Florida, Jacksonville
- Kevin David Costa**
Columbia Univ., NY
- Jeffrey Dickhout**
McMaster Univ., Canada
- Concetta Christine DiRusso**
Ordway Research Inst., Albany, NY
- Amal Kumar Dutta**
Univ. of Texas Southwestern Med. Ctr.
- Tarek M. El-Achkar**
St. Louis Univ., MO
- Perenlei Enkhbaatar**
Univ. of Texas Med. Branch, Galveston
- Darin James Falk***
Univ. of Florida
- Ming Z. Fan**
Univ. of Guelph, Canada
- Thomas Frederick Floyd**
Univ. of Pennsylvania
- Mary Frances Forman**
Univ. of South Carolina
- Martha Franco**
Inst. Nac'l. De Cardiol., Mexico
- Allison D. Fryer**
Oregon Health and Science Univ.
- Jonas Bernard Galper**
Tufts New England Med. Ctr., MA
- Melanie Gareau**
Hosp. for Sick Children, Canada
- Giacomo Garibotto**
Univ. of Genova, Italy
- Dimitrios (Jim) Georgakopoulos**
CVRx Inc., Minneapolis, MN
- David L. Glanzman**
Univ. of California, Los Angeles
- Reinoud Gosens**
Univ. of Groningen, Netherlands
- Sandra Ingrid Hope**
FFYB, Univ. of Buenos Aires, Argentina
- Sung Jin Hwang**
Univ. of Nevada, Reno
- Dhananjay K. Kaul**
Albert Einstein College of Med., NY
- Meghan Kelly**
Boston Univ. Sch. of Med, MA
- Scott P. Kelly**
York Univ., Toronto, Canada
- Clifford G. Kentros**
Univ. of Oregon
- Abdul Hyde Khan**
Tulane Univ., LA
- Melina Kibbe**
Northwestern Univ., Chicago, IL
- Eric Lang**
New York Univ.
- Sergio M. Laranjo**
Fac. De Medicina De Lisboa, Portugal
- Anita T. Layton**
Duke Univ., NC
- Frederic Lemaitre**
Univ. De Rouen, France
- Michelle Ellen Lomax***
Univ. of Portsmouth, UK
- Xianzhong Meng**
Univ. of Colorado, Denver
- Mohammad R. K. Mofrad**
Univ. of California, Berkeley
- Christine S. Moravec**
Cleveland Clinic, OH
- Riccardo Mozzachiodi**
Texas A&M Univ., Corpus Christi
- Tomohiro Nakamura**
Osaka Inst. of Technology, Japan
- J. Alberto Neder**
Federal Univ., Sao Paulo, Brazil
- Sunil Nityanand**
Lansing Community Coll., MI
- Selen Olgun**
Ed Via Virginia Coll. Osteopathic Med.
- Madhusudhan R. Papasani***
Univ. of Idaho, Moscow
- Shayn M. Peirce-Cottler**
Univ. of Virginia, Charlottesville
- Gustavo Perez-Abadia**
Univ. of Louisville, KY
- Nancy J. Philp**
Thomas Jefferson Med. Coll., PA
- Alistair B.M. Phillips**
Nationwide Children's Hosp., OH
- Andrew Philp***
Univ. of Dundee, UK
- Graeme R. Polglase**
Univ. of Western Australia
- Phyllis C. Pugh**
Univ. of Toledo Coll. Med., OH
- Jianhua Ren**
Univ. of Michigan
- Robert P. Rhoads**
Univ. of Arizona, Tucson
- Rajeev Rohatgi**
Mount Sinai Sch. Med., NY
- Juan A. Rosado**
Univ. of Extremadura, Caceres, Spain
- A. Catharine Ross**
Pennsylvania State Univ.
- Ernesto L. Schiffrin**
Lady Davis Inst., Montreal, Canada
- Laura W. Schrum**
Univ. of North Carolina, Charlotte
- Stephen H. Scott**
Queen's Univ., Kingston, Canada
- Katharine A. Semsar**
Univ. of Colorado
- Uma Senthilkumar**
St. Matthews Univ., Cayman Islands
- Suman Setty**
Univ. of Illinois, Chicago
- Tatyana O. Sharpee**
Salk Inst. Biol. Studies, La Jolla, CA
- David Lawrence Sheinberg**
Brown Univ., RI
- Joginder Sidhu**
Dayanand Medical Coll. & Hosp., India
- Lindsay W. Stanek***
US EPA, Research Triangle Park, NC
- Jamilur Rashid Talukder**
West Virginia Univ.
- Sina Tavakoli**
Yale Univ., New Haven, CT
- Dewayne Townsend**
Univ. of Michigan
- Lukmanee Tradtrantip**
Univ. of California, San Francisco
- Rajanikanth Vadigepalli**
Thomas Jefferson Univ., PA
- Ralph J. Van Oort**
Baylor College of Med., TX
- Victor Viau**
Univ. of British Columbia, Canada
- Francisco C. Villafuerte**
Univ. of Oxford, UK
- Lin Wang**
The Scripps Res. Inst., La Jolla, CA
- Jon P. Wehrin**
Swiss Fed. Inst. of Sports, Switzerland
- Matthias E. Werner**
Univ. of Manchester, UK
- Anderson On-Lam Wong**
Univ. of Hong Kong
- Matthew A. Xu-Friedman**
Univ. of Buffalo, SUNY
- Sergei B. Yakushin**
Mount Sinai Sch. Med., NY
- Ozlem Yalcin**
Univ. of California, San Diego
- Joy T. Yang**
Johns Hopkins Univ., MD
- David X. Zhang**
Med. Coll. of Wisconsin
- Guo-Xing Zhang**
Nara Medical Univ., Japan
- Haihong Zhang**
Univ. of Arkansas Med. Scis.
- Szalenyi Zoltan**
Univ. of Pecs, Hungary

New Student Members

Francisco Altamirano

Univ. De Chile

Kevin Ballard

Univ. of Connecticut

Reza Baradar Jlili

Univ. of British Columbia

Erik Behringer

Loma Linda Univ., CA

Emily Blue

Indiana Univ.

Emily Bradford

Univ. of Cincinnati, OH

Roslyn Clapperton

Univ. of the Sunshine Coast, Australia

Andrew Cochran

McMaster Univ., Canada

Anita Cote

Univ. of British Columbia, Canada

Matthew DiStasi

Indiana Univ.

Matthew Durand

Medical Coll. of Wisconsin

Timothy Etheridge

Univ. of Brighton, UK

Christopher Fry

Univ. of Texas Med. Branch

Sara Ghassemifar

Ball State Univ., IN

Joseph Giglioth

West Virginia Univ.

Erin Glynn

Univ. of Texas Med Branch

Lindsay Godin

Mayo Clinic, MN

Sandeep Gopalakrishnan

Univ. of Wisconsin

Michael Greenberg

Boston Univ., MA

Megan Greenlee

Univ. of Florida

David Hamilton

Univ. of Dundee, UK

Jingping Hao

Ohio State Univ.

Erik Hayes

Ball State Univ., IN

Melissa Hayman

Univ. of Utah

Emma Hendy

Univ. of Bristol, UK

Nolan Hoffman

Indiana Univ.

Emily Horvath

Indiana Univ.

Li-Ju Huang

Kaohsiung Med. Univ., Taiwan

Stephen Ives

Univ. of Utah

Dinesh Jasti

Univ. of North Texas

Lori Kang

West Virginia Univ.

Brandon Larsen

Medical College of Wisconsin

Lori Lyman

East Stroudsburg Univ., PA

Antoni Macko

Univ. of Arizona

Osman Mirza

Loyola Univ., IL

Rachel Mullen

Indiana Univ.

Antonia Nemeč

Univ. of Pittsburgh, PA

Arne Neyrinck

Univ. of California, San Francisco

Caitlin O'Meara

Medical College of Wisconsin

Helen Palmer

Norwegian Univ of Sci. & Tech.

Sarah Parker

Medical College of Wisconsin

Guruprasad Pattar

Indiana Univ.

Gregory Payne

Indiana Univ.

Kristi Porter

Emory Univ., GA

Jose Quidgley

Univ. of Puerto Rico

Alana Reed

Emory Univ., GA

Reiesha Robbins

Indiana Univ.

Jennifer Rodenberg

Indiana Univ.

William Roell

Indiana Univ.

Amali Samarasinghe

North Dakota State Univ.

Mark Sayles

Univ. of Cambridge, UK

Cara Sherwood

Univ. of Arizona

Larry Spears

St. Louis Univ., MO

Oyvind Svendsen

Univ. of Bergen, Norway

Wipawee Tantrakool

NIEHS/NIH, MD

Jiro Terada

Chiba Univ., Japan

Ivan Torrg

Inst. National De Nutrition, Mexico

Kerija Touw

Indiana Univ.

Anthony Trace

Indiana Univ.

Tamra Trehearn

Univ. of Nebraska

Nick Unger

Ohio State Univ.

Barbara Vincent

KULeuveb, Belgium

Tanchun Wang

Drexel Univ., PA

Samuel Wanner

Fed Univ., Minas Gerais, Brazil

Reina Watanabe

Indiana Univ.

Alexei Waters

Columbia Univ., NY

James White

Univ. of South Carolina

Ryan Widau

Indiana Univ.

Kate Witkowska

Univ. of Alberta, Canada

Ryan Wolfort

Louisiana State Univ., Shreveport

Tracey Woodlief

East Carolina Univ., NC

Jing Zhang

Baylor College of Medicine, TX

Min Zhang

Indiana Univ.

New Affiliate Members

Joel Gamo

Casa Loma College, CA

Jeffrey McClure

Marian College, IN

Rotimi O. Orisatoki

Spartan Health Sci. Univ., West Indies

Lydia M. Wright-Jackson

College of William & Mary, VA

Federal Research Grants and Administrative Burden

Federally funded biomedical researchers are subject to an increasingly complex set of regulations that govern everything from the protection of human and animal subjects to the handling of potentially hazardous materials to conflict of interest. A recent survey conducted by the Federal Demonstration Partnership (FDP) explores the amount of administrative burden experienced by faculty who receive federal research grants.

The FDP is a cooperative initiative between ten federal agencies (including the NIH, NSF and NASA) and approximately one hundred institutions that receive federal funds. The FDP was established in 1988, and its purpose is to streamline the administration of federally sponsored research. The faculty administrative burden survey was carried out by the Faculty Standing Committee of the FDP and was led by Robert Decker, Ph.D. Results are summarized below and the report can be read in its entirety on the FDP website (<http://thefdp.org/Faculty%20burden%20survey%20report.pdf>).

Responses were received from 6081 PIs or co-PIs from 73 institutions that receive federal research grants, in areas of research including the physical, biological, computer, agricultural, health and social sciences. A majority of respondents were tenured faculty with a rank of associate or full professor.

The goals of the survey were to determine the amount of time spent on activities that support and enable research associated with federal research projects, and to estimate how much more time would be available for research if these burdens were reduced. Time spent writing and submitting grant applications, service on study sections, service on institutional compliance committees, and attendance of mandatory training was excluded from the survey.

The survey results indicate that of the time that was spent by faculty on federal research project activities, only **58%** was devoted to active research. The remaining **42%** of the time was taken up by pre- and post-award research administration. No single overriding burden emerged, but the top tasks identified were writing and submitting grant progress reports, hiring personnel, man-

aging project revenue, equipment and supply purchases, IRB protocol approvals and training, training personnel and students, and personnel evaluations. Most respondents (95%) reported that they would be able to spend more time on research if support was available for research-related administrative tasks.

Based on the findings in the survey, the report suggests several ways in which the level of faculty burden could be reduced. One obvious solution is an increase in the amount of administrative support available to PIs. Another way to alleviate some of the burden is to implement best practices, which may be identified by taking a closer look at institutional practices and the reported levels of administrative burden. Finally, working with federal agencies to harmonize requirements may reduce some of the burden on researchers.

As this is an ongoing topic of concern for federally supported researchers, the APS Public Affairs Committee plans to address this topic at the next Experimental Biology meeting with a session on regulatory burden.

NIH Announces Changes to Peer Review System

On June 6, 2008 the National Institutes of Health (NIH) announced a series of changes intended to enhance the peer review system that will be implemented in the coming months. The initiatives are the culmination of a year-long effort on the part of NIH to update a system that is struggling to deal with flat budgets as the number of applications soars.

A task force led by Drs. Lawrence Tabak and Keith Yamamoto released an 88-page report in February. The NIH evaluated it internally and asked for feedback from the scientific community. As a result, some of the more controversial proposals were dropped including establishing a "not recommended for resubmission" designation, treating all applications as new, and instituting a minimum percent effort requirement.

The changes are organized around four main priorities: engaging the best reviewers, improving the quality and transparency of reviews, ensuring fair and balanced reviews across scientific

fields and career stages, and developing a permanent process for continuous review of peer review. The changes associated with each of the four priorities are summarized below. Some of the major modifications include shortening R01 grant applications to 12 pages, providing administrative supplements for reviewers who serve 18 full study section meetings as chartered members, and scoring applications on a 7 point scale.

Priority 1. Engage the best reviewers

In order to attract and retain the best reviewers, the NIH plans to increase the flexibility of reviewer service by allowing the 12 session reviewer commitment to be spread over 4-6 years. There will also be an expansion of flexible submission deadlines for reviewers and pilots for new forms of electronic review.

Certain awards including Merit/Javits and Pioneer awards will now include a "service expectation." PIs with three or more R01 equivalents or type 2 renewals that exceed \$500,000 in direct costs will now be expected to serve as peer reviewers.

To compensate the time and effort spent on review, reviewers who serve a minimum of 18 full study section meetings as chartered members will be eligible to apply for an administrative supplement of up to \$250,000. Those individuals may also request consideration for Merit/Javits awards on a competitive basis.

Finally, training and mentoring will be provided to all study section chairs, reviewers and SROs using an NIH-wide curriculum based on best practices, augmented by IC and study section specific additions.

Priority 2. Improve the quality and transparency of reviews

The rating system will be modified to focus on specific review criteria, placing less emphasis on methodology, and more on scientific impact. Individual scores will be given for each of five review criteria and assigned on a scale of 1-7, instead of the current 41 point scale. The five criteria that will be scored are impact, innovation/originality, investigator, project plan/feasibility, and environment. Following the initial scoring, applications will be grouped and ranked within relevant categories. Any applications that are streamlined will be given the averaged scores on all five criteria.

To go along with the revisions in the

scoring system, the summary statement will be structured to align with the review criteria. An optional field for “mentoring advice” will be provided and could include a recommendation not to resubmit the application unless fundamentally revised as a new proposal. NIH plans to develop appropriate tools, guidance, and training for reviewers in order to establish best practices for generating summary statements.

Under the new system, the length of R01 applications will be reduced to 12 pages, with other mechanisms scaled appropriately. Appendices will be allowed for specific information such as elements of a clinical trial.

Priority 3. Ensure balanced and fair reviews across scientific fields and career stages

One of NIH’s goals is to continue to support and develop policies to fund a minimum number of early stage investigators (ESIs) and new investigators. To that end, there are plans to cluster review, discussion, scoring and ranking of ESIs within study sections, and pilot percentiling ESIs across all study sections.

In an effort to make sure that experienced reviewers get fair evaluations, there will be equal emphasis on retrospective assessment of accomplishments and a prospective assessment of what is being proposed.

Clinical research applications will also be clustered for review, discussion, scoring and ranking within a study section.

To encourage risk taking by applicants, the review process that was initiated for the Pioneer, EUREKA and New Innovator awards will be expanded, and the Transformative Research portfolio will be grown to reach ~1% of R01-like awards.

Finally, based on analysis of success rates as a function of initial scores, NIH will work to reduce the need for resubmissions by carefully rebalancing success rates among A0, A1 and A2 submissions.

Priority 4. Develop a permanent process for continuous review of peer review

Recognizing the need to carry out ongoing review of the peer review system, NIH will continue to pilot and evaluate new models of review (i.e. editorial board models, use of prebuttals), pilot and evaluate difference methods for

ranking relative merit of applications, pilot and evaluate high bandwidth electronic review and develop metrics for monitoring performance of peer review.

The next step in this process will be the formation of an ad hoc peer review task force that will develop plans and oversee implementation. To learn more about the implementation process and the changes under consideration, go to <http://enhancing-peer-review.nih.gov>.

Colleges Urged to Ban “Pain and Distress” in Animals

The Humane Society of the U.S. (HSUS) has unveiled a new strategy in its 10 year-old campaign to eliminate pain and distress in laboratory animals. The latest phase consists of asking colleges and universities to sign a pledge “to ensure that no laboratory animals in [their] care experience severe and unrelieved pain and/or distress.” A copy of this request can be found at <http://www.nabr.org/pdf/HSUSP&Dmailing.pdf>.

According to *The Chronicle of Higher Education* [<http://chronicle.com/daily/2008/06/3407n.htm>], HSUS sent letters in early March of this year to 301 “teaching oriented” colleges and universities, but by mid June, only 13 institutions had signed the pledge. In an article published online June 17, 2008, the *Chronicle* reported that 18 other institutions had promised to get back to HSUS with a response, while 8 had refused to sign. Officials at some of the 13 campuses told the *Chronicle* that “signing the pledge was easy...because no such research went on there.” At one institution, the only research projects were behavioral studies. At another institution the only procedures involving surgery on anesthetized animals were performed.

The pledge is an outgrowth of a campaign HSUS launched in 1998 with the announced goal of eliminating pain and distress in laboratory animals by the year 2020. In a May 29, 1998 letter, HSUS Senior Vice President for Research, Education, and International Issues Andrew Rowan wrote to IACUC chairs at U.S. research institutions, urging them to join with HSUS in pursuing this objective.

“Like most scientists, The Humane

Society of the United States (HSUS) would like to see the day when animals are no longer used in harmful research and testing,” Rowan wrote. “However, The HSUS recognizes that the goal of completely replacing animal use in harmful research is not likely to be reached in the next few decades.” In the face of that reality, HSUS called upon IACUC Chairs to focus instead on the elimination of painful experiments.

Since then, HSUS has sought to launch a variety of collaborative efforts as part of this campaign. Few have garnered much success because the approaches it recommended were often at odds with the professional judgment of scientists and veterinarians on how best to recognize and manage animal pain and distress. As University of California at San Francisco senior veterinarian Lawrence Carbone explained to the *Chronicle*, “detecting pain on the basis of animals’ behavior is often more of an art than a science.”

In the most recent letter, HSUS President and CEO Wayne Pacelle refers to the more modest goal of “prevent[ing] severe pain and distress in research animals” (emphasis added). Nevertheless, the limited response to date reflects the difficulties of trying to address subtle issues with broad pronouncements.

In an appendix to Pacelle’s letter, HSUS provided more detail about what signing the pledge entails. Institutions will be asked to take into account “what the animals *actually experience*, regardless of steps taken to prevent or mitigate pain and distress” (emphasis in original). The pledge would apply to all vertebrate animals and compliance would require virtually continuous monitoring of each animal at risk for anything above minimal pain or distress. This monitoring would cover the period from the animals’ arrival at the research institution until their death or transfer elsewhere at the conclusion of the study. Moreover, HSUS is asking institutions to consider both the intensity and the duration of pain and/or distress. Unless the institution was certain that animals would experience only low levels of pain or distress before, during, and after the study, constant monitoring and immediate action would be required to ensure that no animal experienced moderate pain or distress for more than an hour or a high level for more than a minute.

Among the procedures that HSUS says “typically cause severe and unalle-

viated pain or distress” are the use of paralytics without anesthesia; recovery from major surgery without analgesics; restraint “lasting more than minutes”; noxious electric shock that is “repetitive and/or not immediately escapable”; and inducing startle through the “repetitive application of a noxious stimulus such as loud noise over an extended period of time.” Other examples of unacceptable research include disease models involving severe arthritis, advanced inflammatory conditions, advanced infectious diseases, advanced metastatic cancer, severe burns, “marked” social deprivation, and the LD50 toxicity test. However, according to UCSF’s Carbone, “some studies using a procedure discouraged under the pledge would not, in fact, cause animals unrelieved pain or distress.”

Some of the institutions that signed the pledge downplayed its significance to the *Chronicle* reporter. An official at one university described the pledge as not legally binding and said that it would not be an impediment to “one day expanding the scope of [the institution’s] research.” Kathleen M. Conlee, the HSUS director of program management for animal research issues told the *Chronicle* that HSUS “will, over time, go up the ladder to those institutions in a different category.” The effort to recruit institutions that do not conduct much research is simply “a place to start.”

NAS to Study Need for Class B Dealers, Animals

During the past year Congress rebuffed two moves to restrict researchers’ access to non-purpose bred dogs and cats. Instead, Congress requested two independent studies to document the scientific need for these animals and to determine the effectiveness of current federal pet protection regulations. These studies are expected to be undertaken during the next year.

The use of dogs and cats in medical research has long been a source of contention. The 1966 Laboratory Animal Welfare Act was intended to ensure that dogs and cats were acquired legally and treated humanely. Although the total number of animals from these species needed for research has declined signifi-

cantly since the USDA first began collecting statistics, and an increasing proportion of the animals are purpose-bred, some research critics still claim that pet theft for research is a thriving industry.

In the spring of 2007, the Humane Society of the United States sought to attach a rider to the NIH appropriations bill that would have prohibited the use of funds to purchase non-purpose bred dogs or cats from USDA-licensed Class B dealers. HSUS, which the *Washington Post* has called “the largest and richest animal advocacy organization in the world,” suggested to Members of Congress that these animals are inappropriate as research subjects because they lack uniformity in genetic background and health status. HSUS also asserted that existing pet protection laws are ineffectual and that the only solution is to eliminate Class B dealer sales of dogs and cats. Research advocates countered that non-purpose bred dogs and cats are excellent models for certain kinds of biomedical research precisely because of their diverse genetic backgrounds, and that existing laws are sufficient to ensure pet safety as long as they are appropriately enforced.

Confronted with this profound difference of opinion, the Senate Appropriations Committee opted to ask NIH to commission an independent study to “determine how frequently such animals [supplied by Class B dealers] are used in NIH research and the need for these animals in research.” NIH was expected to sign a contract with the National Academy of Sciences by early summer June, 2008 to conduct this study.

The same issue was brought to Congress again a few weeks later in the context of the farm bill, a massive package of legislation that sets agricultural policy including price supports. Since the USDA is also the agency charged with enforcing the Animal Welfare Act (AWA), and the farm bill is considered “must pass” legislation, it has often served as a vehicle for AWA amendments. That is what occurred on July 26, 2007 when the farm bill was brought to the House floor, and two AWA amendments were added by voice vote without discussion or debate. One amendment would have banned Class B dealer sales

of dogs and cats for medical and veterinary research, teaching, and testing. The other would have prohibited live or recorded sales demonstrations of medical devices using animals.

In early December, it was the Senate’s turn to debate the farm bill. Just before final passage on December 14, 2007, a collection of amendments were added by unanimous consent, including a Class B dealer ban. Although the Senate language differed slightly from the House language, because the two sets of language were so similar, there was grave concern among some researchers that Congress would eliminate Class B dealers even before the NIH-commissioned study could be carried out. It was therefore both surprising and gratifying a few months later when the final farm bill was announced, and it turned out that the conferees dropped both the prohibition on sales demonstrations of medical devices and the Class B ban. The conferees included one important AWA amendment in the final version of the bill: an increase in the maximum penalty for violations from \$2,500 to \$10,000.

The \$290 billion farm bill was sent to the President on May 15, but its tortuous course continued until mid June. President Bush vetoed the bill on May 21, as was expected, and both the House and Senate overrode the veto the same day. However, due to a printing error, two major sections of the bill had never been sent to the White House. To avoid a legal challenge to the legislation, the House and Senate passed the legislation again a few weeks later. President Bush then vetoed it again, and on June 18, both houses of Congress overrode the veto for a second time.

In an explanatory statement, the conferees acknowledged the controversy over Class B dealers and indicated that the Agriculture Committees wanted to review the findings of the NIH-commissioned report on the scientific need for non-purpose bred dogs and cats. In addition, the Committees announced plans to ask the Government Accountability Office (GAO) to “review APHIS regulations to ensure that they are sufficiently assuring the source of random source animals.” ❖

Communications Update

The Communications Department continues to work on a variety of initiatives to bring science to the public.

Journal Release Program

We issued press releases highlighting journal articles that have led to media placements in the Atlanta Journal Constitution, CBC, Toronto Globe and Mail, Sunday Times (Australia), Telegraph (UK) and WebMD among other outlets. These are our latest releases:

Lifestyle Can Alter Gene Activity, Lead to Insulin Resistance

Mouse Aging Study: It's Better to Go Hungry than Go Running

A Genetic Variation is Linked to Sugary Food Consumption

Study Examines Validity of EPO Testing

The release on the validity of EPO testing for athletes appeared on the front page of *The New York Times*. Other print and online publications picking up

the story included the *International Herald Tribune*, NBC Sports, Yahoo! Sports, Bloomberg, *U.S. News & World Report*, *St. Louis Post-Dispatch*, *Sporting News*, *Minneapolis-St. Paul Star Tribune* and the Associated Press. The story was also picked up on television and radio.

All of our press releases can be found at <http://www.the-aps.org/press/>.

Traffic to Press/Public Page

We continue to track the number of hits (page views) that occur on the press/consumer site (<http://www.The-APS.org/press>). We are interested in this data because it reflects the impact of the copy and content that we have posted (press releases, podcasts and other tools).

The chart below (Table 1) indicates how traffic to these public/consumer pages has changed since 2005, and in particular, during the past 18 months (2006-2008), the period in which we doubled our outreach efforts.

The chart shows there has been a steadily increasing trend in visits to the site beginning in January 2007. Traffic for the first quarter rose 51% (2006 vs. 2007) and by 11% the quarter during the following year (2007 vs. 2008). Overall, traffic rose by nearly 70% during the first quarter during these years.

Life Lines: The APS Podcast

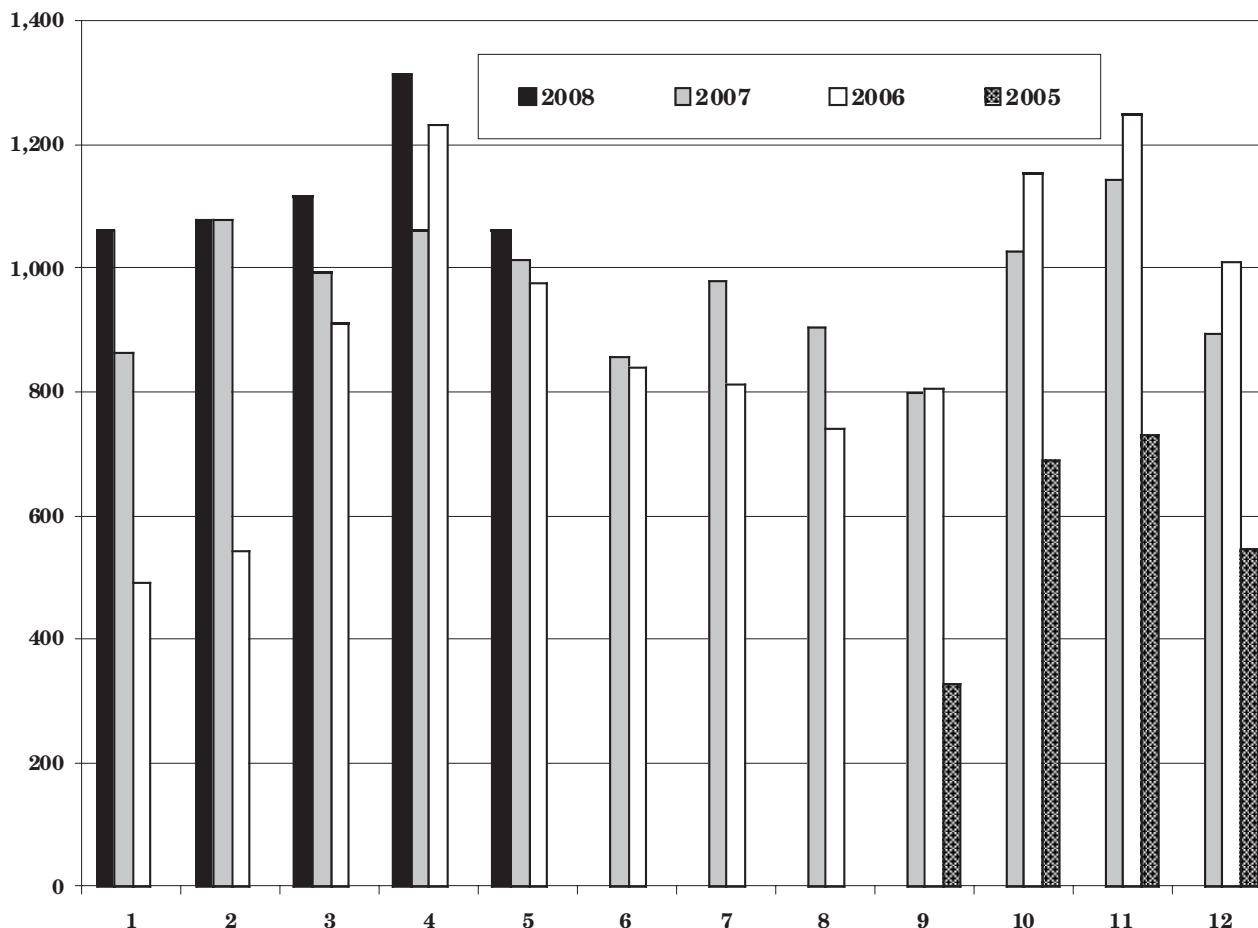
Since we launched the APS podcast series Life Lines in October 2007, we have aired a dozen episodes. Two of this spring's podcasts featured our Bowditch and Cannon lecturers, in addition to podcasting interviews with several symposia speakers.

Our most recent episodes were:

Episode 10: Hydrogen Sulfide - What a Gas. Jeannette Doeller and David Kraus of the University of Alabama, Birmingham; Research Progress on Colon Cancer. John Carethers, University of California, San Diego.

Episode 9: Warm body, cold heart. Barbara Block, Stanford University; Longer, Deeper. Andreas Fahlman,

Table 1. Number of Page Views Compared by Month and Year.



University of British Columbia.

Episode 8: World War II Aviation Physiology. Jay Dean, University of South Florida.

Life Lines attracts new and returning listeners each month. Please remember

to listen and subscribe at <http://www.lifelines.tv>.

Errata: A previous report about the APS-sponsored AAAS Mass Media Fellow got her name wrong:

it's Lindsay Chura. She is a graduate of Mount Holyoke College and at press time was working at U.S. News & World Report.

Announcing Online Seminars for
IACUC Staff and PHS Institutional Officials
from the Office of Laboratory Animal Welfare

Upcoming:

September 18, 2008

Freedom of Information Act Policies

December 4, 2008

When Terms and Conditions Are Not Met

Guest speakers: Patricia A. Brown, V.M.D. M.S.,
DACLAM, Director, OLAW &
Eileen Morgan, Director, Division of Assurances,
OLAW

For More Information:

IACUC Staff:

<http://www.grants.nih.gov/grants/olaw/e-seminars.htm>

PHS Institutional Officials:

<http://www.grants.nih.gov/grants/olaw/outreach.htm>

PhUn in November!

PLAN FOR THE AMERICAN PHYSIOLOGICAL SOCIETY'S
ANNUAL PHYSIOLOGY UNDERSTANDING WEEK
DURING THE 1ST WEEK IN NOVEMBER...

- **August:** **PARTNER** with a teacher NOW! Visit www.PhUnWeek.org and email phunweek@the-aps.org for program info.
DEVELOP a plan with the teacher.
- **September:** **SUBMIT** the PhUn Week Event Planner. Quantities of freebies are limited. Requests are on a first-come, first-served basis.
- **October 1:** **DEADLINE** for PhUn Week Event Planners.
- **Mid-October:** **PUBLICIZE** in local news outlets.
- **November:** **PhUn Week! VISIT** a classroom!

**Ph
Un
Week**

**CONNECT WITH A K-12
TEACHER NOW
AS THE SCHOOL YEAR BEGINS!**

www.PhUnWeek.org

Postdoctoral Positions

Postdoctoral Position: Cardiovascular Medicine: Position available now in Molecular & Cellular Cardiology, Genome Center, Davis Campus. Postdoctoral position available immediately to work on HSP60, Cardiac Injury and Inflammation. Previous experience with cell culture, molecular and protein techniques an asset. Salary dependent on experience. Please submit CV, summary of research experience and names and contact information for three references to: Anne A. Knowlton, MD, Professor, Molecular & Cellular Cardiology, Department of Medicine, Department of Medical Pharmacology, Genome Center, Davis, CA 95616. Tel.: 530-752-5461; Email: aaknowlton@ucdavis.edu.

Postdoctoral Position: To study the control of breathing during wakefulness and sleep under the direction of Jason H. Mateika PhD at Wayne State University. Projects in the laboratory are focused on respiratory and autonomic plasticity in humans during wakefulness and sleep following exposure to intermittent hypoxia. The projects are supported by grants from the NIH and Veterans Affairs. Visit <http://physiology.med.wayne.edu> for more details. Required qualifications include a PhD or MD and a strong background in respiratory physiology. Please send a single pdf file containing a cover letter, curriculum vitae and the names and addresses of three references to Dr. Mateika (Email: jmateika@med.wayne.edu).

Postdoctoral Fellowship: The Research Institute at Nationwide Children's Hospital has two Postdoctoral Fellow Positions available to address critical questions concerning the roles of oxidative stress and hyperglycemia in cardiovascular biology, diabetes and heart failure. Minimum Qualifications: PhD in physiology or a health or science related field; highly motivated with a strong background in cardiovascular pathophysiology, diabetes, air pollution biology and/or the use of mouse models of disease; experience with Langendorff assessment of heart function, as well as isolated myocyte mechanical and fluorescent assessment is desired; experience in one or more of the following areas: histology, immunohistochemistry,

Western blotting, real-time RT-PCR, echocardiography and/or angiography. To apply, please send a curriculum vitae and names of three references to: Dr. Pamela Lucchesi, Director or Dr. Loren E. Wold, Principal Investigator; Center for Cardiovascular and Pulmonary Research; The Research Institute at Nationwide Children's Hospital; 700 Children's Dr.; Columbus, OH 43205. pamela.lucchesi@nationwidechildrens.org or loren.wold@nationwidechildrens.org Candidates of diverse backgrounds are encouraged to apply. [EOE]

NIH-funded Postdoctoral Position: Immediately available to study cellular/synaptic mechanisms and plasticity regulating the function of CNS autonomic and neuroendocrine neurons in health and disease states, including hypertension, heart failure, obesity and diabetes. Our laboratory uses state-of-the-art multidisciplinary approaches including patch-clamp electrophysiology, confocal live imaging, immunohistochemistry, molecular biology and 3D cell reconstruction. Highly motivated applicants with a background in Neuro-science and experience in one of the listed techniques, preferable electrophysiology, are encouraged to apply. Candidates must have a PhD or MD in Neuroscience or related field. A competitive salary and benefits package in accordance with NIH guidelines is available. Send a CV and a list of three references to Javier E. Stern MD PhD, Department of Physiology CA-3143, Medical College of Georgia, 1120 15th St, Augusta GA 30912; Email: jstern@mcg.edu, website: <http://www.mcg.edu/som/phy/Stern.html>. In addition please apply online at <http://www.mcg.edu/Jobs> and reference Requisition # 3448. [AA/EEO/Equal Access/ADA Employer].

Postdoctoral Position: In potassium channel physiology/pharmacology is available immediately in the laboratory of Dr. Jerod Denton at Vanderbilt University Medical Center. Our group uses state-of-the-art methods including conventional and fully automated patch clamp electrophysiology, high-throughput compound library screening, small-molecule pharmacology, molecular modeling and biochemistry to study basic and disease-related inward rectifying K⁺ channel biology. Candidates must have a PhD degree in Physiology,

Pharmacology or related field and strong interest in ion channel physiology. Applicants should send a CV and names of two references to: Jerod Denton, PhD, Department of Anesthesiology, Vanderbilt University Medical Center, B4220 Medical Center North, 1161 21st Avenue South, Nashville, TN 37232. Email: jerod.denton@vanderbilt.edu.

Faculty Positions

Assistant Professor or Instructor: Alfred University invites applications for a one year Visiting Assistant Professor or Instructor in Anatomy and Physiology to begin in August 2008. Primary teaching responsibilities include courses in comparative and human anatomy, physiology and nutrition with the opportunity to teach courses in the individual's area of expertise compatible with the Division curriculum. Previous teaching experience is preferred. Earned doctorate preferred, ABD considered. Send resume, transcripts (unofficial), a list of at least three references, and statements about teaching philosophy to: Cheryl Emmons, Chair, Division of Biology and Chemistry, Alfred University, Alfred, NY 14802. Electronic submissions and questions may be sent to emmonsc@alfred.edu. Application review begins May 19 and will continue until the position is filled. More details at <http://las.alfred.edu/biology/>. [AA/EEO]

Assistant and Associate Professor (Two Research Positions): The Department of Obstetrics & Gynecology at the University of Texas Medical Branch at Galveston is seeking candidates for two tenure/tenure-track faculty positions at the rank of Assistant and Associate Professor. These positions are part of an ongoing strengthening of the basic science areas of our department. Candidates for the Assistant Professor position must show evidence of productive research accomplishments. Candidates for the Associate Professor position must have a currently funded research program. All candidates are expected to develop/maintain a fully independent research program in any area of biology of early pregnancy, vascular adaptations during pregnancy, developmental origins of adult diseases, fetoplacental growth and function. The positions include competitive salary,

multi-year start-up packages, and ample laboratory space. The Ob/Gyn Department is ranked third in NIH funding and houses all four NIH collaborative research network grants. In addition, both WRHR and BIRCWH centers are housed in the department. UTMB maintains outstanding core facilities that support transgenic mouse work, confocal imaging, mass spectrometry, molecular biology, and biomedical engineering. Please submit a PDF containing your curriculum vitae, a two-page description of current and future research plans, and names of three references to: Dr. Chandra Yallampalli, Distinguished Professor, Dept of Ob/Gyn, UTMB, Galveston, TX 77555-1062, Tel.: 409-772-7592; Email: chyalam@utmb.edu. Candidates of all backgrounds are encouraged to apply. [AA/EOE].

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

Endowed Chair in Healthy Aging: The Sealy Center on Aging of the University of Texas Medical Branch seeks outstanding external candidates for the newly endowed Lloyd and Sue

Ann Hill Chair in Healthy Aging in the general academic area of translational and/or clinical aging research, including, but not limited to, one or more of the following areas of interest: muscle biology, muscle function, exercise, nutrition, metabolism, rehabilitation, integrative physiology, biomechanics, obesity, cardiovascular health. The successful candidate must have a relevant doctoral degree, and a nationally-recognized scholarly publication record and extramural funding. Applicants must have a history of successful pre-and postdoctoral mentoring and be willing to significantly contribute to the vibrant interdisciplinary research and research training activities of the Sealy Center on Aging. The Sealy Center on Aging of the University of Texas Medical Branch provides significant infrastructural support, including a manuscript office, and has a long history of successes in interdisciplinary research and research training on aging, including the award of prestigious ongoing Federal grants, such as the UTMB Claude D. Pepper Older Americans Independence Center. The University of Texas Medical Branch also has one of the largest Acute Care for Elders Units, which has been recently designated as an inpatient research unit for clinical and translational studies on hospitalized older patients. The tenured academic appointment will be made at the associate or full professor level, and will include a highly competitive start-up package. The University of Texas Medical Branch is an equal opportunity, affirmative action institution which proudly values diversity. Candidates from all backgrounds are encouraged to apply. Nominations and letters of intent, including curriculum vitae, can be submitted in confidence to the attention of: James S. Goodwin, MD, Director, Sealy Center on Aging, The University of Texas Medical Branch, 301 University Blvd., Galveston, TX 77555-0460. jsgoodwi@utmb.edu.

Visiting Assistant Professor of Physiology Position: Visiting Assistant Professor of Biology in Physiology, begins fall 2008. This position is a one-year visiting position. Teaching responsibilities include a one-semester course in Mammalian Physiology with lab, and participation in a team-taught inquiry-based, Introductory Biology course. Qualifications include a PhD in Physiology or closely related area, with

teaching and postdoctoral experience preferred. A commitment to teaching and undergraduate research in an interdisciplinary setting is expected, along with potential for obtaining external funding. A specialty course may be developed. Please send curriculum vitae, three references to include Email addresses, philosophy of teaching/research, publication samples, and transcripts to: Dr. Jerry E. Honts, Biology Chairperson, Drake University, 2507 University Avenue, Des Moines, IA 50311. Email: jerry.honts@drake.edu. Fax: 515-271-3702. Review of applications begins immediately, and continues until the position is filled. Drake University is an equal-opportunity employer, and actively seeks applicants who reflect the diversity of the nation. No applicant shall be discriminated against on the basis of race, color, national origin, creed, religion, age, disability, sex, gender identity, sexual orientation or veteran status.

Chair Department of Physiology and Pharmacology: Wake Forest University School of Medicine (WFUSM) seeks applications for the position of Professor and Chair, Department of Physiology and Pharmacology. Physiology and Pharmacology is one of the top basic science departments at WFUSM with a significant presence in the national and international biomedical community. The Department currently has 30 full-time faculty members, 35 graduate students and 14 postdoctoral fellows training in the department. High standards for excellence in research, education, and service have gained national and international recognition for the department. The current extramural research and training support is at \$11,576,801 which includes three NIH funded Centers, two NIH funded pre-and postdoctoral Training Grants, 34 Individual R01 grants, two Young Investigator K01 grants and \$1,100,407 in other government or Industry funding. In 2007 the Department of Physiology and Pharmacology was ranked fifth in the nation in NIH funding. The stature of the faculty in the department is further demonstrated by the presence of five M.E.R.I.T, three NIH Senior Scientist Awardees and a number of faculty serving on NIH grant review committees, editorial boards and as officers in national scientific societies. Major areas of research

emphasis within the Department include Hypertension-Cardiovascular Sciences, Neurobiology of Alcohol and Substance Abuse, Neurodegenerative Disorders, Aging, and Perinatal Biology. In addition, faculty are actively involved in collaborations throughout the medical center holding joint appointments in several departments, and participating in interdisciplinary Centers and Institutes, including: the Institute of Regenerative Medicine, the Translational Science Institute, the Non-Human Primate Center, and the Sticht Center of Aging. WFUSM is seeking an outstanding candidate with the vision and leadership skills needed to strategically maintain and build upon this well-established and nationally recognized Department. Competitive candidates should hold a doctoral degree or its equivalent, an outstanding record of research and extramural funding, and demonstrated leadership skills as well as excellence in collaboration and mentoring skills. Wake Forest University School of Medicine is committed to equal opportunity, affirmative action and the diversity of its faculty and staff. Women and minorities are strongly encouraged to apply. Applications including a current curriculum vitae or nominations should be sent by mail or Email to: Douglas Lyles, PhD, Chair, Physiology and Pharmacology Chair Search Committee, Attn: Adriene Cunningham, Dean's Office, Wake Forest University School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157, Email: dlyles@wfubmc.edu. Review of applications will begin in July. Departmental information can be viewed at, <http://www1.wfubmc.edu/PhysPharm/>.

Lecturer in Kinesiology: University of Southern California: Full-time, non-tenure track position to teach introductory and advanced physiology and exercise prescription; one-year appointment with possibility of renewal. Requirements: PhD in Kinesiology or related field. Demonstrated excellence in teaching at the college level. Review of dossiers will begin immediately and continue until position is filled. Submit: Letter of interest; teaching philosophy; CV; three recent letters of recommendation; and recent teaching evaluations to: Lorraine Turcotte, PhD, Chair, University of Southern California, Department of Kinesiology, 3560 Watt

Way, PED 107, Los Angeles, CA 90089-0652. USC values diversity and is committed to equal opportunity in employment. Women and men, and members of all racial and ethnic groups are encouraged to apply.

Senior Associate Dean for Medical Education: The Senior Associate Dean for Medical Education reports directly to the Dean and has a broad range of responsibilities briefly outlined below. The candidate should be a successful educator with excellent leadership and management skills, and be capable of working with a diverse group of stakeholders. Goal: 1) ensure, and continue to advance, the quality of medical education at the University of Vermont College of Medicine (COM); 2) continually update and improve the Vermont Integrated Curriculum (VIC) as appropriate to maintain the best curriculum possible; 3) continue to develop COMET, the online curriculum and assessment interface of the VIC; 4) continue to advance the quality of, and reputation for, primary care education at the COM; 5) develop a simulation program to complement our standardized patient program; 6) enroll the best, brightest, motivated, caring and diverse student body possible; 7) assure the best outcomes possible, quantitatively and qualitatively, for our students; 8) increase the scholarship by our educators. Direct Responsibility: 1) supervise admissions, student affairs, curriculum, and all other areas primarily concerned with undergraduate Medical Education. Choose the administrative structure and personnel best suited to fulfill these functions; 2) manage the budget for medical student education; update as appropriate the formula for allocating funds for teaching to the departments; develop policies for allocating scholarships and subsidized educational loans to achieve the desired composition of the student body; manage medical student enrollment (including admissions, transfers, leaves, and remediation) to ensure a stable number of students across the four years of the curriculum; 3) manage the educational relationships with the COM's affiliated teaching hospitals; chair the Instructional Improvement Committee for the VIC; develop and Chair an Education Committee comprised of the leaders of Medical Education, Graduate Education, Graduate Medical Education and

Continuing Medical Education; evaluate the effectiveness of the COMET Program and its Director. Shared Responsibility: 1) work with the Department Chairs and VIC Level and Course Directors to assure teaching is of the highest quality; 2) work with the Dean of the COM and the Department Chairs to ensure availability of qualified faculty to teach basic and clinical sciences; 3) work with the Associate Dean for Faculty and Staff Development and Diversity to assure the recruitment of a diverse staff and student body; 4) work with the Development Office to raise and steward philanthropic support of student educational expenses; 5) work with the Associate Dean for Finance and Administration to manage COMET resources. The University of Vermont is an Equal Opportunity employer. Women and people from diverse racial, ethnic and cultural backgrounds are encouraged to apply. Doctoral degree required (MD or MD/PhD preferred). Application deadline is August 15, 2008. Candidates should submit a Curriculum Vitae and an application letter. The letter should outline the candidate's experience in direct teaching, educational scholarship, developing curricula, organizing courses, managing people and budgets, and promoting diversity in staff and students. These materials should be sent (electronic preferred) to Linda Thatcher at the following address: Karen Richardson-Nassif, PhD, Chair, Senior Associate Dean for Medical Education Search Committee, c/o Linda Thatcher, (linda.thatcher@uvm.edu), E-126 Given Building, University of Vermont College of Medicine, Burlington, VT 05405-0068. Or apply online at <http://www.uvmjobs.com>.

Assistant/Associate/Full Professor: A.T. Still University School of Osteopathic Medicine in Arizona (ATSU-SOMA) invites application for a full time faculty position in physiology at a rank commensurate with experience. A successful candidate is expected to have primary interests in teaching and curriculum development, along with an ability to work in teams with clinicians and basic scientists from other disciplines. A PhD in physiology or relevant field of study is required and recent graduates from a PhD program are encouraged to apply. Preference will be shown to candidates who possess the ability to teach in related disciplines

such as anatomy, histology, embryology or pathophysiology. ATSU-SOMA faculty members assume other responsibilities including serving on committees, interviewing student applicants, participating in faculty meetings and faculty development activities, and advising students. This is a salaried position with a full benefits package. Interested candidates should send a cover letter, curriculum vitae, and list of references to: Raymond J. Pavlick, PhD, Assistant Dean of Curriculum and Professor of Physiology, A.T. Still University, School of Osteopathic Medicine in Arizona, 5850 East Still Circle, Mesa, AZ 85206. Electronic submission of application materials to rpavlick@atsu.edu is acceptable. Review of application materials will begin August 1, 2008 and will continue as long as the position remains open. For more information about the position or ATSU-SOMA, candidates are encouraged to contact Dr. Pavlick via Email at the above address. To learn more ATSU, visit our website at <http://www.atstu.edu>. ATSU does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, age, disability, or status as a Vietnam-era veteran in admission and access to, or treatment and employment in its programs and activities.

Dean of Division of Kinesiology: The University of Michigan at Ann Arbor invites nominations and applications for the position of Dean of the Division of Kinesiology. From its beginning as the Department of Physical Education over 100 years ago, to the formation of an independent academic unit in 1984, the University of Michigan has been home to one of the leading programs in the study of human movement in the United States. During the past 25 years, important research and scholarship have continued to grow, along with program offerings. Now, with 29 full-time faculty and more than 800 undergraduate and 50 graduate students, the Division of Kinesiology offers undergraduate programs in Athletic Training, Movement Science, Physical Education, and Sport Management, and graduate programs including three Masters' programs and a comprehensive PhD program. The Division of Kinesiology is one of the 19 academic units within the University of Michigan headed by a dean. Reporting to the Provost and Executive Vice President for Academic Affairs, the next

Dean of the Division of Kinesiology will be a recognized leader in the field, setting the intellectual tenor and scholarly standards for Kinesiology. S/he must draw on administrative acumen and academic rigor to position the Division at the forefront of an increasingly competitive field, and maintain and expand upon the Division's commitment to excellence in education and research. In addition, the Dean will secure diverse resources for the Division through deft fund-raising. Qualifications: The ideal candidate is a dynamic and energetic leader with administrative experience and exceptional judgment along with the vision and commitment to take an already excellent unit within an internationally recognized research university to a leadership position as the nation's preeminent Kinesiology program. Enthusiasm for continuing and enhancing Kinesiology's collaboration with the other schools and units within the university is essential. Candidates will demonstrate a strong commitment to diversity in all its forms and the capacity to be an able and energetic fundraiser. An earned doctorate in a relevant discipline is required, with a notable record of scholarly accomplishment and other qualifications appropriate for appointment as a full professor in Kinesiology. Nominations and/or applications, accompanied by a letter of interest, current curriculum vitae, and the names and contact information of three references, should be submitted to: Julie DeSorgher, Auerbach Associates, Inc., 385 Concord Avenue, Suite 103, Belmont, MA 02478. Electronic submissions preferred: email caitlin@auerbach-assc.com. The University of Michigan, as an affirmative action/equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action.

Research Positions

Physiologist: The University of Central Florida, College of Medicine (UCFCOM) is seeking applicants for a multi-year contract position in the Department of Medical Education. The successful applicant will be primarily responsible for the physiology content in a 16-week integrated structure and function module in the first year of the curriculum, and collaborate with both Basic and Clinical Science faculty to

integrate and reinforce physiology concepts throughout all four years of the curriculum. Applicants are required to have a PhD in physiology, sports medicine, or a related field with a strong background in physiology and have extensive experience in presenting content in the areas of general physiological processes, cardiovascular system, body fluids, renal, respiration, GI, endocrine and neurophysiology. For more information on UCFCOM, please visit our website at <http://www.med.ucf.edu>. To apply please send a letter of interest addressing your qualifications for the position of Physiologist, a current curriculum vitae and three references with contact information. Include any information demonstrating curriculum innovation(s), educational scholarship, and/or educational excellence. Review of applications will begin immediately and continue until position is filled. College of Medicine - Physiology Search Committee University of Central Florida, PO 160116 Orlando, FL 32816-0116; 407-823-1841; Email compphysio@mail.ucf.edu. Please visit <http://med.ucf.edu> UCF encourages applications from minorities, women, and other underrepresented groups. Search materials are available for public review as provided by Florida statute. [AA/EOE]

Research Associate-Cancer Center Lab: Putting people first - that's what sets us apart. At Providence Health & Services, we believe that everyone who works here has the power to touch people's lives. Our employees' dedication and professionalism enhance the quality of everyone's experience. For you, that means working with people who truly work as a team. Assists the Laboratory Chief and/or Research Scientist in the planning, organization, implementation, and design of research activities in the Cancer Research laboratories. Performs research experiments, including, but not limited to: in-vivo animal work, immunizations, organ harvest, functional immunity assays, biochemical protein purifications, and flow cytometry. Scientific and administrative duties are performed independently under the supervision of the Laboratory Chief and/or Research Scientist after review of new assignments and program goals and objectives. Assists and contributes in the development of grant applications and manuscripts. Difficult or unusual problems are resolved in consultation

with the Laboratory Chief and/or Research Scientist. Supervises, assists and provides expertise for the research activities of new laboratory members, research fellows, graduate students, etc. Performs all duties in a manner which promotes team concept and reflects the Sisters of Providence mission and philosophy. Required: BS in appropriate biomedical field with five to 10 years

experience in biomedical research OR M.S. in field of specialty and minimum three years experience. Preferred experience includes sterile mammalian tissue culture techniques including cryopreservation and recovery of cells, cell maintenance and passage. Basic molecular biology including DNA and RNA isolation and quantitation and PCR techniques. In-vivo animal work, immu-

nizations, organ harvest, functional immunity assays, biochemical protein purifications, and flow cytometry. Have a valid driver's license. Be able to maintain flexible hours. For more information contact Annette.Fletcher@providence.org or to apply visit us at <http://www.providence.org/careers> (Job #33063). ❖

Senior Physiologists' News

Letter to Julio Cruz

Dudley F. Rochester writes: "I received your letter last month, but have been away from Charlottesville most of the last four weeks. I apologize for the delay in answering, and hope it is not too late.

"I retired as Head, Division of Pulmonary & Critical Care Medicine, Department of Internal Medicine, University of Virginia School of Medicine in 1993 and was made Professor Emeritus. I stayed on an extra year to help with clinical work, but left in 1994.

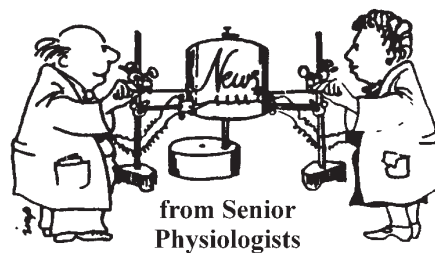
"From 1995 to 1997 I participated in a study of exercise dyspnea and catechol amines at the Salem, Virginia Veterans Medical Center, but we could not get the paper published. At the same time, I began to volunteer with the American Lung Association of Virginia.

"I served on the board of America Lung Association of Virginia from 1995 to 2002, serving as president 2000-2002. I served on the national board of the American Lung Association 1999-2002. In 2003-2004 I was on the board of the Virginia Conservation Network, and from 2004-2007 I was on the Virginia Department of Environmental Quality State Advisory Board – Air Pollution. I prepared an extensive report "Air Pollution and Health" that has estimates of economic as well as medical costs. It can be found at the web site <http://www.deq.state.va.us/air/sabrpts.html>.

"In 2008 I was elected to the vestry of St. Paul's Memorial Church in Charlottesville and also serve on environmental committees at St. Paul's and at Westminster Canterbury of the Blue Ridge where I live. I am deeply concerned about global warming, climate

change and supplies of fresh water. Because I wish to minimize travel, I prefer to work on these issues in Charlottesville, through my church and retirement community."

Frank G Moody writes: "What a pleasant surprise and pleasure to receive a birthday greeting on my 80th from the American Physiological Society through you. I have had a very close relationship to the organization over the years, and have worked with and for many of its illustrious members. I thought that I might best initiate an abbreviated biosketch. As you will note, I remain on the full time faculty of the University of Texas Medical School in Houston as a Professor of Surgery. My primary role is to relate to the teaching and practice of medicine and surgery at many levels in whatever will best benefit the learners (as well as the more junior teachers). This is not only a great privilege, but also fun. My primary interest over the years has been to care for patients with digestive diseases, and try to bring them back to a more normal state by surgical interventions. While the classroom has been the clinic and operating room, I have maintained a keen interest in the origins of gastrointestinal disease and their physiologic consequences. My bibliography in a way suggests that I am a dabbler, but in defense of that image I



moved along from peptic ulcer disease, to gallstones, to pancreatitis, to intestinal permeability, to obesity as my clinical practice demanded. I have been active in the laboratory throughout my career, and continue to participate as a co-investigator on a clinical study with Heinrich Taegtmeyer on the metabolic effects of obesity on the heart. I was able to receive very generous funding from the NIH for almost forty years, and maintained an active laboratory throughout that period of time. I used the laboratory not only for discovery but also for recruiting surgical residents and medical students into academic surgery. One of the most satisfying aspects of my career has been the number of students who have worked with me who have gone on to assume major chairs of surgery and leadership roles in their various specialties to include community practice. Our laboratory approach used what would be considered now the 'bunsen burner, smoked-drum kymograph' approach. We did upgrade rapidly as new techniques became available, and I was able to keep up by collaborating and associating with several outstanding physiologists at the various institutions that I have been at. In fact, my move from the Chair at Utah to the Chair of Surgery at UT Houston was related to an opportunity to work with the outstanding Department of Physiology headed by Stan Schultz, and the School itself to be headed by Ernie Knobil, both former Presidents of the APS. My closest association however has been with Norm Weisbrodt, not only an outstanding scientist and teacher, but a great person to be around. I emphasize to my associates how important it is for us to work in close collaboration with the basic scientists. It is no longer possible to be a one man/woman show.

Collaborative research, using all the tools available is the only way to move forward, and even then, the progress is slow. I also encourage individuals who want to pursue a career in academic surgery to spend at least two years in a basic science laboratory. This will often screen out the individuals who are not suited for the rigorous life of a surgical scientist.

"I was most fortunate at the end of my surgical training at the Cornell-New York Hospital Medical Center to have the opportunity to spend two years at the Cardiovascular Research Institute in California with Richard Durbin PhD, one of the few people that had an inkling of how water moved through biological membranes in 1963. This was a treat, since Julie Comroe had attracted a large cadre of outstanding scientists, and I greatly admired the way they went about their work. Dr. Comroe used to chide me a bit by implying that surgeons were just dumb plumbers. I did not take offense, since he was partly right. I subsequently went on to work at the University of Alabama where I had close contact with Rehm, Hirschowitz, Sachs and others. It was here that I learned how to manage my time while carrying out a busy surgical practice and a heavy teaching load. By the time I moved to Utah to assume the Chair of Surgery at Utah, I was prepared to properly mentor future surgeon/scientists some 15 years after I graduated from Medical School. I use this time frame to inform my students that it takes time to become an educated plumber. There are many rewards along the way, and some unique ones for those that live long enough. For example, I recently received a Lifetime Achievement Award from the Society of University Surgeons in recognition of the number of outstanding surgical leaders that I helped to get started on their careers. Like Mentor, 'I bask in their success.' If you wish, I can stretch my memory, and put more thoughts and experiences down on paper. Again, many thanks for the birthday greeting."

Yih-Loong Lai writes: "I retired from the Department of Physiology, National Taiwan University, at the end of July, 2003. Right after my retirement, I worked part-time at MDS Pharma Services in Taipei, as a consultant. At the end of February of 2008, I stepped down the consulting job. Then, I became one of the "completely retired" people. I like to travel, and thus I joined tour

groups to visit Australia in March and then to New Zealand in April of this year. Last year, I toured several places of Taiwan, including Peng-hu (islands), Orchid Island, Syue Mountain (the second highest mountain in Taiwan, the picture shown below) and Kinmen. Also, last September, I made sightseeing in Kweilin, China. In addition to my consulting job and traveling, I have worked on physiological textbooks. We have groups of scholars, including my previous colleagues and students, to make translation (from English to Chinese) of two physiology textbooks. One is Vander's brief edition (*Human Physiology - The Mechanisms of Body Function*) and another one is by Ganong (*Review of Medical Physiology*). We finished the first one about two years ago and the second one is getting close to be printed. Also, Li-Ling Wu (my previous student) added Chinese guidance (key summaries and explanations of phrases) on Vander's *Human Physiology* and I checked it over before its publication early this year."

Letter to Beverly Bishop

Mario Vassalle writes: "Thank you kindly for your wishes and those of the American Physiological Society for my 80th birthday.

"After my last two NIH grant applications did not succeed on being funded, I decided to retire as a Professor of Physiology and Pharmacology on July 1 2006. At that date, I was appointed Emeritus Professor in the Department of Physiology and Pharmacology at this same institution and I was given office space to finish up my scientific work. "I am generally at work during weekdays (to the disbelief of some), with the exception of a few months in 2007 when I was a Visiting Professor at the University of Parma Medical School, Parma, Italy. I was involved in the study of stem cells with whole cell patch clamp and for the treatment of myocardial infarct in an animal model.

"Here in New York, I have to write up experimental data collected in the past on a few topics. A paper on a slowly inactivating plateau sodium current has appeared in 2008 in *Experimental Physiology*. I labeled it I_{Na2} to distinguish it from another slowly inactivating sodium current (I_{Na3}) that we reported in 2003 in the *Journal of Physiology* and that seems to be impor-

tant for the pacemaker activity of Purkinje fibers.

"Right now, I am engaged in writing a manuscript on the autonomic control of the sino-atrial node, whose experiments were carried out in vitro and seem to offer what I consider some rather interesting findings. In the meanwhile, a memoir that Dr. K. Koizumi and I wrote about Dr. C. McC. Brooks (who was one of my teachers) has appeared in print a couple of weeks ago by the National Academy of Sciences.

"I do continue to write (in Italian and English versions) aphorisms, philosophical essays and (now occasionally) a poem. I consider those activities as the expression of different facets of my identity and certainly not 'hobbies.' I usually pursue those interests during the week-end when my family is still peacefully resting, although I dwell with these matters now and then at any time.

"I myself have managed to publish two books with 1000 aphorisms each and four books of poems in the USA. Two of those books have been published in the Italian version by publishers in Italy. In that country, I also published another book of aphorisms and another of poems in the Italian version (the latter has just appeared by Maremmi Publisher in Florence). I am very keen about publishing the last two books also in America, but there is so much I can do each day.

"Right now, I am polishing my fourth book of aphorisms (*Sea Shells*) and I am writing an essay entitled, *Synthesis* with the subtitle of 'An outline of human nature.'

"As for my 'words of wisdom for younger colleagues, I know that experience cannot be transmitted, not only because each of us is different, but because the environment that we live in changes all the time. Nevertheless, I will offer some of my reflections.

"When I started my research activity in the USA in 1959, electrophysiology of the heart was a relative young branch of science. It was already a departure from the study of whole organ, but an advantage of a new technique is that it is bound to produce plenty of new results. At that time, we had animal laboratories for the students in which they saw physiology in action. I thought the animal laboratory was a major strength of the American educational system. In fact, it was in one of those labs that I started developing the concept that ventricular standstill by the vagus nerve is

due to the unmasking of the overdrive suppression that the sinus node exerts on the automaticity of Purkinje fibers. That kind of physiology has an obvious relation to the physiology of the body.

"Since then, molecular biology has made great strides. This highly positive development brings about knowledge that does have an immediate importance also for clinical medicine. But in every endeavor there are some drawbacks. In this case, researchers tend to get deep in very narrow areas. Sometimes a great competence in a given topic is at the expense of grasping the general picture. This in itself matters little (specialized knowledge is a must nowadays), except when it comes to teaching the future generations of physicians. Sometimes, the teaching of organ physiology to medical student may be viewed as something foreign to one's interest and (what is worse) to one's intimate knowledge of what one is asked to teach outside one's field of specialization.

"Since the advantages of the molecular biology approach are overwhelming, the sensible thing is to try to increase the training of future teachers. For that reason, I would think that graduate students should obligatorily take (and pass) the courses in basic sciences taken by the medical students. This is probably done in several places, but perhaps not in all of them. It might be correctly objected that this cannot be worse than CBLs, where students are supposed to teach each other.

"Another point that troubles me for its possible dire consequences is the fact that the financial support of scientific research by institutions like NIH has gradually shifted to include the support of Universities (overhead) and researchers (in the form of salaries and fringe benefits). This means that the cost of carrying out a scientific project has increased greatly, with the consequence that fewer grant applications can be funded. This is a serious threat not only to younger investigators (lack of grant support for a few years would be professionally fatal) but to the very future of science since it would discourage research careers. I know very well that the Universities need all the financial support that they can get, but not at the expense of their very function. The point that I raise is bound not to be very welcome, but I guess that the problems that we do not like to consider do not disappear for that reason.

"Of course, I realize that more scientific progress has been accomplished in the last 60 years or so than during the rest of the history of humanity. I consider myself fortunate to have been and being a part of these extraordinary times. Nay, I am proud of it."

Letter to Vernon Bishop

Allen Silbergleit writes: "It's hard to believe that I am indeed 80 years old, at least chronologically. I am most thankful to my ancestors and their genes for allowing me, at least to date, to be somewhat younger physiologically. Graduation from medical school is well over 50 years in the past while residency training in general and cardiothoracic surgery, graduate school and the doctorate in physiology is approaching 50 years. Marriage to my teenage bride, and still lovely, is also more than 50 years in the past. It's also hard to believe that I have been a member of the faculty at the Wayne State University School of Medicine (WSUSOM) and affiliated hospitals since 1962, with joint appointments in the Departments of Physiology and Surgery since the beginning.

"I have not yet retired! Although relatively few of my vintage are still fully active professionally, I am neither the oldest in age nor the longest serving faculty member at the WSUSOM. I consider my 46 years of service in one institution to be indicative of perseverance and dedication but my grown up doctor sons consider it to be a lack of ambition! My spouse of many virtues does tend to be slight hypercritical of those she loves and occasionally asks: 'What are you trying to prove?'

"My efforts in physiology and surgery have not been separate careers but interdigitate for the most part. I have always been a great advocate of the basic science underpinnings of clinical medicine and this was one reason for my co-founding the Southeast Michigan Center for Medical Education (SEM-CME), 35 years ago, now the largest community based medical education consortium in the United States. One of my fears, especially in the early years, was that the surgeons would consider me a physiologist and the physiologists would consider me a surgeon! This did not materialize and I have been accepted as both, by both. Additionally, I am neither the only surgeon-physiologist at WSUSOM nor the first. Dr. Charles Johnson, who was Professor and

Chairman of the Department of Surgery at WSUSOM until his untimely death in 1960, founded the Detroit Physiological Society in 1937 and the Detroit Surgical Association in 1947.

"Perhaps closest to my heart have been the many medical students, graduate students and residents it has been my pleasure to teach. There is a special niche for the subset of students who have received the combined MD-PhD degree. My proudest accomplishment, and still operational, is my participation in the guiding of students and residents who have surpassed my colleagues and me in ability and/or widespread recognition. That's the way it should be. Our students should be better than we are in order to advance civilization.

"Since I consider teaching to be the noblest of professions, I was most pleased to receive the Parker J. Palmer Courage to Teach Award from The Accreditation Council for Graduate Medical Education (ACGME) last year, one of 10 in the nation. Parker Palmer Awardees are asked to contribute some words of wisdom or inspiration to the ACGME Annual Report and for the 2007 Report published in December 2007, the centerfold prints my contribution, highlighting one sentence I phrased as the creed of the teacher: 'What could be more important that the advancement of civilization by the young men and women we imbue with the spirit of humanism and inquiry?'

"Many of my long-term efforts have been at S. Joseph Mercy Oakland (SJMO), a midsize to large teaching hospital affiliated with WSUSOM, which does not own a university hospital. Of the several hats I have worn, only one is emeritus, and that is Program Director of Surgery at SJMO. I am still Chairman of the Division of Surgery. During my surgery heyday, I operated on a great many patients, including some of the famous and infamous in Michigan and beyond and on a number of my faculty colleagues and family of faculty colleagues. In this era of transparency and disclosure, I have to note that some of my work continues on the dark side including administrative functions at the hospital and the Dean's Council at the medical school. On the bright side, I have been the official host to various Nobelists who visit Michigan.

"On the academic side, I continue to publish in eclectic fashion. Numbers are respectable but have never been particularly prolific. Since we hear what we like

to believe, the quality and significance of a number of our papers are quite decent, and in some areas, much more than decent! I was on the full cover of the Journal of the American Medical Association (JAMA) ten years out of medical school for my work in mycotic aneurysms. My doctor sons note that it's all been downhill after that! Hah, hah, they've inherited my wry genes. I like to believe my colleagues when they note that I have probably sponsored more award-winning student and resident research than anyone in Michigan, ever. The most recent award-winning presentation was on April 9, 2008. Much of my work has been of the bench to bedside type, now popularized as a form of 'translational research,' although some other

papers are purely basic science and some are purely clinical. I must admit that I am not above a sense of satisfaction when I see some of our work referenced in peer review journals and in medical textbooks. Another interest, lifelong, has been in history and ranges from American history in high school to medical history for many decades. You don't have to be old to be a historian but it helps.

"It doesn't seem so long ago that I had a hard time accepting that I was over 40 years old! I do get reminders. My number one son recently told me, 'Dad, I hate to tell you that you have a 50-year-old son.' Soon after, one of the best-known heart surgeons in Michigan told me, in similar fashion, 'I hate to tell you that you have a 75-year-old (surgical) resident.'

"I am everlastingly thankful to my great family: my wonderful wife, Ina, who raised great kids while I was busy doing what busy doctors do, my children, male and female, and my grandchildren, male and female. Both sons went to medical school at the University of Michigan rather than my home base at WSUSOM, causing a few of my deans to twit me just a tad. One son, Richard, is a neuro-radiologist at Beaumont Hospital here in metro Detroit and the younger, Robert, is a tenured professor at the University of Michigan Medical School in Ann Arbor. Both are more capable than me, and as I said before, that's great—that's as it should be." ❖

Books Received

Animal Physiology, 2nd Edition

Richard W. Hill, Gordon A. Wyse, and Margaret Anderson

Maine, Sinaure Associates, Inc., 2008, 762 pp., 624 illus., index, \$119.95.

ISBN: 978-0-87893-317-4

Obesity: Causes, Mechanisms, Prevention, and Treatment

Edited by Elliott M. Blass

Maine, Sinaure Associates, Inc., 2008, 450 pp., 80 illus., index, \$54.95.

ISBN: 978-0-87893-037-1

Recently Deceased Members

Albert B. Craig

Rochester, NY

Domenic A. De Bias

Philadelphia, PA

Gertrude Falk

London, UK

Martin Farias, III

Kingsville, TX

David Grob

Roslyn, NY

Steven C. Herbert

New Haven, CT

Ernst R. Jaffe

Port Washington, NY

Frederick W. Kasch

San Diego, CA

Stephen Krop

Virginia Beach, VA

Ching-Tong Liu

Frederick, MD

Jacob Robbins

Bethesda, MD

Rajinder S. Sikand

New Haven, CT

Edmund H.

Sonnenblick

Bronx, NY

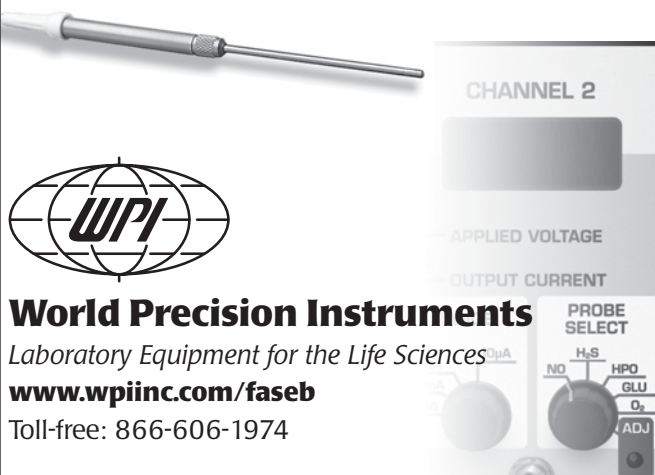
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APS Member Shares in \$1 Million Kavli Prize in Neuroscience

APS Member Sten Grillner, of the Karolinska Institute, in Sweden was one of three scientists sharing the \$1-million Kavli Foundation Prize in Neuroscience. Joining Grillner as award recipients were Pasko Rakic, of the Yale University School of Medicine and Thomas Jessell, of Columbia University. The prize honors their contributions to explaining how networks of cells in the brain and spinal cord develop and function.

The California businessman and physicist Fred Kavli started the Kavli Foundation in 2000. The Kavli prizes are awarded by the foundation in partnership with the Norwegian Academy of Science and Letters and the Norwegian Ministry of Education and Research.

APS Member Receives Lefoulon-Delalande Foundation Prize

Professor Dario DiFrancesco received the prestigious Lefoulon-Delalande Foundation Prize for the discovery of the If current in the sinus node, which is the physiological “pacemaker” of the heart. Professor DiFrancesco demonstrated that the If current is a key determinant for the generation and control of heart rate.

Created in 2002, the Lefoulon-Delalande Foundation Prize is awarded each year to a scientist who has made important contributions to cardiovascular physiology, biology, or medicine. Based on the suggestion of an international scientific panel, chaired by Professor Alain Carpentier, the Institut de France awarded the “Grand Prix Scientifique” 2008 to Dario DiFrancesco, Director of the Laboratory of Molecular Physiology and Neurobiology, University of Milan, Italy. The prize, which is recognized internationally as the most prestigious in the cardio-

vascular field, was awarded for Professor DiFrancesco’s discovery of the cellular mechanism underlying the generation and regulation of heart rate, and the therapeutic application of this discovery.

APS Member Accepted to National Academy of Sciences

The National Academy of Sciences announced the election of 72 new members and 18 foreign associates from nine countries in recognition of their distinguished and continuing achievements in original research.

APS Member J. Anthony Movshon, Silver Professor and director, Center for Neural Science, New York University, New York City has been elected to the Academy.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln that calls on the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

Additional information about the Academy and its members is available online at <http://www.nasonline.org>.

Rochelle Buffenstein is Associate Professor, University Texas Health Science Center, San Antonio Department of Physiology, Barshop Institute of Aging & Longevity, San Antonio, TX. Prior to her new position Buffenstein was in the Department of Biology at the City College of New York, NY.

Indika Edirisinghe is currently an Assistant Research Professor at the National Center for Food Safety & Technology, Illinois Institute of Technology, Summit-Argo, IL. Edirisinghe was formerly a Postdoctoral Fellow, University of Rochester NY.

David Harder has been named associate dean for research at the Medical College of Wisconsin. This is a new position, charged with overseeing mentorship and faculty development programs for laboratory-based faculty. Harder, a cardiovascular researcher, will continue to serve as interim director of the MCW Cardiovascular institute.

Kyoko Miyasaka is Department Head at Tokyo Kasei University, Department of Nutrition and Physiology, Tokyo, Japan. Prior to his new position, Miyasaka was at the Tokyo Metropolis Institute of Gerontology, Department of Clinical Physiology, Tokyo, Japan.

Robert B. Schoene is now at Bozeman Deaconess Hospital, Department of Medicine, Bozeman, MT. Prior to his new position, Schoene was at University California, San Diego, CA.

Javier E. Stern is currently Professor at Medical College of Georgia, Augusta. Prior to his new position Stern was Associate Professor at University of Cincinnati, Cincinnati OH.

Per A. Tesch is presently a Professor at Mid Sweden University, Department of Health Sciences, Ostersund, Sweden. Prior to his new position, Tesch was at Karolinska Institute, Department of Physiology, Stockholm, Sweden.

Richard Vari has joined Virginia Tech Carilion School of Medicine, Department of Physiology and Therapeutics, Roanoke VA. Prior to his new position, Vari was at the University of North Dakota School of Medicine, Department Pharmacology, Grand Forks, ND.

The Wine Wizard

Peter Wagner

Whites: 2007 Nobilo Pinot Gris, New Zealand, \$11. Pinto Gris, aka Pinot Grigio in Italy, is a relatively uncommon white wine for the USA, but is slowly becoming more popular. Nobilo, and New Zealand generally, are best known for Sauvignon Blanc. Nobilo has never been a standout, but is right in the pack of good quality, fairly priced, wines. Their Pinot Gris surprisingly emerged from the recent San Diego wine competition a white wine sweepstakes winner. It has a typical stone fruit (peach-like) nose. The palate is viscous and rich with strong, fresh peach/pear fruit intensity and medium acidity. The palate is full and lasting. While pinot gris is not quite as appealing to me as sauvignon blanc in terms of flavors, this wine is very, very good indeed, especially at the price. It would pair well with a creamy chicken dish, or with a full flavored cheese.

2007 MAN vintners Chenin Blanc, Coastal South Africa, \$7. This one is for Andy Young of Natick, who thought I had forgotten! Serious Chenin Blanc is hard to find these days. This wine is sumptuous. The nose combines apricots, lemon and tropical fruit with a touch of burnt sugar after standing a while. The palate is clean, rich and viscous with excellent acidity - just as well, as there is a touch of sweetness. In fact, I suspect there may have been some botrytis (aka "noble rot") in the vineyard. That would explain the concentrated, viscous, slightly sweet, apricot nature. Layers of apricot, lemon and tropical fruit are very evident, with a touch of cashew nut. The length and balance are excellent, and for just \$7, it's a terrific value. This will be a real crowd pleaser with its strong fruit, lush ripe off-dry flavors and good acidity. Drink it cool to cold.

Reds:

2006 Neil Ellis Pinotage, Stellenbosch, South Africa, \$14. This medium dark wine has an earthy dark cherry and spice nose with sweet vanilla. The palate is soft, spicy, and earthy with lots of rich dark cherry/plumy fruit and definite black pepper (not a bad thing at all). Tannins are soft, length and balance are excellent. Probably not a wine to keep too long, but it's very nice right now. Tasted blind, I would have guessed it was a Syrah.

2004 First Drop Shiraz, Barossa Valley, South Australia, \$14. This is a



Peter Wagner

very pleasant example of Oz shiraz, good value for the price. There is earth, black pepper and a floral grape character on the nose. The palate has the same features, with excellent acid, medium tannin, and medium weight. Structure is good, length and balance are fine. Not outstanding, but definitely good enough to recommend at the price.

2007 Castle Rock Pinot Noir \$10. Castle Rock has consistently overdelivered Pinot Noir for the price, and the new 2007 vintage is no exception, but it is \$1-2 more than last year. I am told their secret is in adding small amounts of Syrah, enough to bolster the fruit intensity but not enough to hide the more delicate Pinot Noir flavors. This wine has a nose of cherry with some black pepper (the latter perhaps from the Syrah). The fruit is forward, medium in intensity and clean with red and black cherry flavors. There is spice, black pepper, a touch of stemmy green character and nice acidity. Tannins and oakiness are light, and the length is quite good. This is attractive, not deep or complex, but easy to drink and tastes like a Pinot.

2006 Slipstream Grenache, McLaren Vale, South Australia \$20. This is a bit more expensive than most I write about, but if you want a pure expression of ripe, tasty Grenache, this would be

very good one to try. The nose has floral red berry character with a touch of black pepper. The palate is forward with very good red cherry and strawberry flavors, sweet vanilla, light oak and tannin, OK acid and good length. This is a medium weight wine, but at 14.5% alcohol, there is a bit of heat evident on the palate.

2005 Kilikanoon Shiraz "Parable" McLaren Vale \$33. This wine is definitely pricier than most that appear here, but is absolutely first class, delicious, deep, complex, balanced, elegant, and well worth the price for a special occasion. The nose is not what makes this wine - it is a bit closed, with some plums and dark cherry and wood. The palate is truly sensuous. The mouthfeel is velvety smooth, viscous and rich with intense fresh, ripe dark plums and cherries. Acidity is perfect, tannins and oak flavors are clearly in the background. There is depth and complexity of flavors and very good length. It has 15% alcohol, but you would never know it because of the fruit intensity. I have tasted more wines which both cost more than \$33 and are far less interesting or good than this one than I care to remember.

2004 Elderton "Command" Shiraz, Barossa Valley, South Australia, \$80. I have not tasted this, and therefore am not technically recommending it. Plus, as you all know, I try and find you wines under \$15-20 that are better than their price, so this one does not fit. Year after year I love this wine, but last year it went for "only" \$60. The problem is that Robert Parker gave the 2004 a score of 98, so that despite the price it will soon be history!! 98 is a better score than given to most Bordeaux First Growths that sell for 3-4 times the price, and it still costs only ¼ the price of the two Oz classics (Penfolds Grange and Henschke Hill of Grace). I am fully confident that the 2004 Elderton is fabulous, but I have not been able to part with \$80 yet, even though per dollar it is likely better than most of the so-called great wines of the world. If anyone out there experiences the 2004, please tell me what it is like. I am sure words like massive, concentrated, elegant, and complex will come to mind. ❖

September 3-6

Genomic Perspectives to Host Pathogen Interactions, Cambridge, UK. *Information:* Mrs. Lucy Criddle, Conference Organiser, Event Management, The Wellcome Trust Conference Centre, The Wellcome Trust Genome Campus, Hinxton, Cambridge, CB10 1RQ. Tel.: +44 (0)1223 495004; Fax: +44 (0)1223 495023; Email: l.criddle@wtconference.org.uk; Internet: <http://www.wellcome.ac.uk/>.

September 3-7

Society of General Physiologists 62nd Annual Meeting and Symposium (SGP), Calcium Signaling and Disease, Woods Hole, MA. *Information:* Susan Shephard, Society of General Physiologists. Tel.: 508-540-6719; Fax: 508-540-0155; Email: sgp@mbl.edu; Internet: <http://www.sgpweb.org/symposium2008.html>.

September 8-9

1st International Symposium on Audible Acoustics in Medicine and Physiology, West Lafayette, IN. *Information:* Jo Gelfand, Weldon School of Biomedical Engineering, Purdue University, 206 S. Martin Jischke Drive, West Lafayette, IN 47907-2032. Tel.: 765-494-2996; Email: jo@purdue.edu; Internet: <https://engineering.purdue.edu/Acoustics/>.

September 8-15

Cardiovascular & Respiratory Systems Modeling: From Cell to Organ, Seattle, WA. *Information:* Kay Sterner, The NSR Physiome Project, Box 355061, University of Washington, Seattle, WA 98195-5061; Tel.: 206-685-2005; Email: sterne@u.washington.edu; Internet: <http://www.physiome.org/Course/sept07.html>.

September 11-14

Workshop on the Biology of Signaling in the Cardiovascular System, Cape Cod, MA. *Information:* Bernadette Englert, Tel: (301) 760-7745; Email: mailto:bernadette@navbo.org; Internet: <http://www.navbo.org/BSCVS>.

September 18-20

23rd AACVPR Annual Meeting, Indianapolis, IN. *Information:* Internet: <http://www.aacvpr.org/meeting/>.

September 27-28

Workshop on Mathematical Modeling of Human Metabolism and Body Weight Regulation, Bethesda, MD. *Information:* Kevin Hall, PhD, Investigator, Laboratory of Biological Modeling, National Institute of Diabetes & Digestive & Kidney Diseases, NIH, 12A South Drive, Room 4007, Bethesda, MD 20892-5621. Tel.: 301-402-8248; Fax: 301-402-0535; Email: kevinh@nidk.nih.gov; Internet: <http://www.mitacs.ca/conferences/HMBW/>.

September 28-October 2

XXII International complement Workshop, Basel, Switzerland. *Information:* Administrative Secretariat, ICW, C/O AKM Congress Service, Clarastrasse 57, PO Box 4005, Basel, Switzerland. Tel.: +41 61 686 77 11; Fax: +41 61 686 77 88; Email: info@akm.ch; Internet: <http://www.akm.ch/ICW2008/>.

October 1-4

Integrated Approaches to Brain Complexity, Cambridge, UK. *Information:* Mrs. Lucy Criddle, Conference Organiser, Event Management, The Wellcome Trust Conference Centre, The Wellcome Trust Genome Campus, Hinxton, Cambridge, CB10 1RQ. Tel.: +44 (0)1223 495004; Fax: +44 (0)1223 495023; Email: l.criddle@wtconference.org.uk; Internet: <http://www.wellcome.ac.uk/>.

October 6-7

Mitochondrial Biology in Cardiovascular Health and Diseases Conference, Bethesda, MD. *Information:* Tel.: 443.451.7254; E-mail: jennifer@strategicresults.com; Internet: <http://www.mitochondrial2008.com/>.

October 20-November 1

19th International Symposium on the Autonomic Nervous System, Kauai, HI. *Information:* Anita Zeller, AAS Executive Secretary, 18915 Inca Avenue, Lakeville, MN 55044, USA, Tel.: 952-469-5837; Fax: 952-469-8424; Email: zeller.anita@mayo.edu.

October 23-26

The 2nd World Congress on Controversies in Neurology (CONy), Athens, Greece. *Information:* ComtecMed, Congress Organizers, 53 Rothschild Boulevard, PO Box 68, Tel Aviv, 61000, Israel. Tel.: +972-3-5666166; Fax: +972-3-5666177; Email: info@comtecmed.com; Internet: <http://comtecmed.com/cony/2008/>.

October 30-November 2

The 2nd World Congress on Controversies in Diabetes, Obesity and Hypertension (CODHy), Barcelona, Spain. *Information:* Comtec Headquarters & Administration, 53 Sderot Rothschild, PO Box 68, Tel Aviv, 61000, Israel. Tel.: 972-3-5666 166; Fax: 972-3-5666 177; Email: cony@comtecmed.com; Internet: <http://www.codhy.com/>.

October 30-November 2

2008 Biophysical Society Discussions: Calmodulin Modulation of Ion Channels, Asilomar, CA. *Information:* Alexandra Frager, Meetings Assistant, Biophysical Society, 9650 Rockville Pike, Bethesda, MD 20814. Tel.: 301-634-7325; Fax: 301-634-7133; Email: afrager@biophysics.org; Internet: <http://www.biophysics.org/discussions/>.

October 31-November 1

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

November 11-15

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

November 23-27

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