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Inside

A MATTER OF OPINION

No Free Lunch

Martin Frank

In the last few months, there has been a movement to encourage scientists to boycott (meaning to cease subscribing to, submitting to, and reviewing for) any journal that refuses to provide free access to content within six months of publication through PubMed Central. APS agrees with the need to make content freely available to the scientific community at large and, as described below, has implemented several avenues to do so. However, the Society believes that the current Public Library of Science (PLOS) proposal is seriously flawed in a number of areas, including its inability to protect the integrity of the published scientific data.

Summarized below is a brief history of this movement, the problems that APS sees with the PLOS proposal, and the efforts that APS has been making to freely disseminate the contents of its recent and archived publications.

Approximately two years ago, Pat Brown, Stanford University, and Harold Varmus, then the Director of the National Institutes of Health, proposed to change how biomedical scientists publish their research (http://www.sciencemag.org/cgi/content/full/283/5408/1610). In 1999, the goal was to create E-Biomed, the biological counterpart of the physics archive at Los Alamos National Laboratories. The current effort to change scientific publishing centers on several elements including the PLOS, BioMed Central (BMC), and PubMed Central (PMC).

Supporters of E-Biomed proposed using the Internet to publish pre-prints of manuscripts in a reviewed and an un-reviewed format. This electronic forum was intended to replace the existing system for peer review and publication of biomedical research by nonprofit and commercial publishers alike. Its promoters argued that since the US government is the primary funding source for most of the biomedical research, the resulting scientific content should be made freely available to the entire scientific community. After all, the argument ran, why should private entities—even scholarly societies—be allowed to profit from work supported by US taxpayer dollars?

The proposal stimulated enormous discussion about the use of the Internet to disseminate scientific content and the future of scholarly publication. It is no secret that APS opposed the original E-Biomed concept, and while it is important to review why the Society opposed E-Biomed, it is equally important to take note of the catalytic role this proposal has played in furthering the cause of free, electronic dissemination of scientific content.

APS objected to E-Biomed because it would have undermined our ability to safeguard the integrity of journal contents, as well as undermined the economic viability of our scholarly journals and the service activities that they support. As with many other scholarly societies, APS uses journal revenues to run and subsidize other programs, particularly in the areas of education, outreach to under-represented minorities, public affairs, student awards, and scientific meetings. Yet the E-Biomed backers told these societies that it was wrong for them to generate a profit through subscription fees from research funded by government grants. Instead, the E-Biomed proponents suggested that societies could overcome this problem by increasing dues and meeting registration fees to compensate for the lost subscription revenue.

An alternative option, suggested by Varmus, was for publishers to ask authors to shoulder the full cost of peer review and other costs related to transforming a manuscript into a finished publi-

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cation. For APS journals, we estimated that this would involve a surcharge to authors of $2,500 to $3,000 per manuscript—more with color figures—to distribute the research content for free to the community. This aspect of the E-Biomed proposal failed to recognize the fact that foreign scientists account for about half of the articles submitted to many society journals. These scientists could not charge such fees to an NIH grant, nor did they have such resources available from their countries.

Another concern about the original E-Biomed proposal was that it would have placed the NIH in the position of not only reviewing and funding scientific proposals but also of serving as arbiter for their publication. Furthermore, it would also have put the NIH in the position of forcing the scientific community to abandon its traditional means of information dissemination and the measure of quality and impact afforded by ISI Impact Factors.

As a nonprofit scientific society that publishes peer-reviewed journals, APS took exception to the fact that throughout 1999 the promoters of E-Biomed seemed to be targeting nonprofit society publishers. Scientific societies that publish journals traditionally have had the lowest subscription prices for the highest impact journals (http://www.library.wisc.edu/projects/glsdo/cost.html). It was difficult to understand why society journals were being targeted when the impetus for E-Biomed was that librarians were concerned about the over-priced, relatively low-impact commercially published journals.

"At present, there are over 250,000 articles available in the free access library, making the HighWire Press collection the largest repository of free life science literature in the world."

On the plus side of the balance sheet, the E-Biomed proposal proved to be a stimulus that led many publishers to reconsider how best to provide the biomedical literature to the scientific community. APS and other scientific society publishers had already been working since 1996 with HighWire Press (http://www.highwire.stanford.edu) to create an electronic library of biomedical literature. HighWire Press currently serves as the host for over 260 journals published by non-profit society publishers. These journals are fully searchable and linked to each other through the references in the articles, creating a virtual library of scientific information. In addition, APS and many of the other participating non-profit publishers remove access controls after 12 months or less to allow the public free and unrestricted access to the content in their journals. At present, there are over 250,000 articles available in the free access library, making the HighWire Press collection the largest repository of free life science literature in the world. Interestingly, this collection does not meet the PLOS criteria for free access.

While E-Biomed failed because of the reasons noted above, as well as its projected role as preprint server, it did serve as a stimulus for publishers to review how journal content is priced and how to ensure free and open access to the content after some defined period of time. It also resulted in the creation of PMC as a permanent archive of free biomedical literature. Both Pat Brown and Harold Varmus currently serve on the PubMed Central Advisory Committee.

PMC (http://www.pubmedcentral.nih.gov/) is managed by the National Center for Biotechnology Information, a part of the National Library of Medicine. PMC initially called for publishers to deposit their digital content into government computers to allow for enhanced searchability and archiving. The cost of the archiving was to be born by the Federal government, but the cost of converting digital files from the original online publication format to one compatible with PMC was to be born by the publishers. It seemed doubly disadvantageous for scientific societies to be asked to bear these extra costs when the whole premise of E-Biomed was that they were not entitled to make money from the manuscripts that were published in their journals. Many publishers were also concerned by the lack of tangible plans for how PMC would ensure the integrity of the information in this archive.

To date, only eight established journals have deposited their content with PMC, and no doubt this has caused considerable frustration for the promoters of a Federally managed archive of free

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What APS is Doing to Give Free Access to its Content

APS journals are available through HighWire Press as part of an online collection of more than 260 life science journals

The content of the entire HighWire collection is completely searchable

Since November 1999, APS has made the content of its journals available free online 12 months after publication

APS journal content is available on the HighWire Press site as part of a database with over 250,000 free articles

APS is in the process of scanning and placing "legacy" content online so that scientists will have online, searchable access to research published prior to 1996

APS is working with HighWire Press on two types of electronic archives to protect scientific content far into the future

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scientific literature. The only other content to be found on PMC are the articles published in a number of online journals created by BMC. BMC (http://www.biomedcentral.com) is a recently established for-profit online publishing house that is committed to making original research articles freely available to all. Interestingly, Varmus serves on the BMC Editorial Directorate, which might be why articles published in the BMC journals are cited immediately in PubMed and archived in PubMed Central. It should be noted that APS had to petition to have *Physiological Genomics* cited in PubMed and it took the Society 14 years to get *News in Physiological Sciences* cited in PubMed. Similarly, it took AAAS two years to get the *Signal Transduction Knowledge Environment* (STKE) included in PubMed.

Perhaps it was the reluctance of established scientific publishers to adopt PMC that caused a group of PMC supporters to band together under the banner of the PLOS to ask the scientific community to boycott any journal that refuses to release its content into PMC within six months of publication. It is worth noting that there is a significant overlap between those who signed the PLOS call for a boycott and those who serve on the PMC Open Letter Advocacy Group and the BMC Editorial Directorate.

APS has no argument with the PLOS's desire to make the scientific literature more freely available to the public and members of the scientific community, especially those in developing countries. Since the mid-1980s APS has been sending its journals—at no cost to the recipients—to institutions in the former Soviet Union, Eastern Europe, and sub-Saharan Africa. With the advent of electronic publication, APS and other society publishers are making the journals available free in those developing countries with adequate Internet connectivity. For those lacking such connectivity, especially those in sub-Saharan Africa, APS makes the content available through SatelLife, a satellite transmission system.

Similarly, APS has been making the content of our journals freely accessible 12 months after publication since 1999. In so doing, APS has been able to maintain the subscription revenues that allow us to create programs designed to benefit the membership and the scientific community. In addition, these revenues will allow the Society to post online "legacy data," articles published from 1996 back to when each of the Society's journals were first published. The APS Council has authorized the expenditure of $250,000 to prepare and scan the content of journal articles published between 1986 and 1996 for posting on the journal sites in 2001. Eventually, APS hopes to make the entire content of the *American Journal of Physiology* available online back to its start in 1898. This material will be freely available, but APS can only think of preparing it for online publication because of the revenue the Society generates from its journal program.

". . .APS has been making the content of our journals freely accessible 12 months after publication since 1999."

According to their recent statements, the proponents of the PLOS (http://www.publiclibraryofscience.org) believe that publishers have no right to manage the content or profit from the dissemination of journal articles. One of the PLOS advocates, Michael Eisen, Lawrence Berkeley National Laboratory, suggested that publishers were like midwives who helped with the "birth" of an article and then refused to turn the "baby" over to the "parent." This inept analogy takes no account of the fact that even a midwife charges a fee for her services! The PLOS proponents also condemn publishers for generating profits through subscription fees to individual and institutional subscribers when a significant portion of the research being published is funded by the Federal government. It seems not to matter to them that society publishers use these profits to benefit their members and the scientific community.

Interestingly, some of the PLOS signatories are also investigators who have profited from Federal support for their research. NIH has provided initial support for many of the investigators who have gone on to convert their research into profitable biotech companies, yet they do not return any revenue or royalties to the NIH to support future research efforts of the scientific community. If it is wrong for publishers to profit from research supported by the Federal government, is it not wrong for individual investigators to profit? This is an issue that the promoters of the PLOS fail to address.

Along with economic consideration about when to release content to the public, there are legitimate questions about why information has to be deposited in a single government database in order to give the public access to it. Originally, it was suggested that content had to be deposited into PMC to allow for enhanced search capabilities. However, just what those enhanced search capabilities would entail have not been defined or communicated to the publishers. In addition, search engines such as AltaVista and Yahoo can already effectively search content that is not deposited on their computers. Nor have the proponents of PMC described their archiving plans. APS is currently working with HighWire Press on two sophisticated archiving projects, known as LOCKSS and Dark Cave.

APS also finds the call from the

PLOS to cede ownership or copyright of the articles unacceptable. APS accepts responsibility for the content that it publishes in its journals, agreeing to correct the literature should errata occur and to investigate ethical questions should they arise. If the Society were to relinquish the copyright after six months, as called for by the PLOS, the public would have to rely on no one, or perhaps only authors themselves, to make corrections to the literature and to investigate misconduct. This also would allow others to profit from the "value" added by APS to the published journal articles by creating collections for resale to the public.

APS has set its own priorities for providing public access to the content of its journals as stated above. Some of these objectives are less than what the PLOS proponents seek, but some of these objectives go further than their demands. Furthermore, APS has already implemented significant portions of its program to make the contents of its journals available, and the results can be seen at the HighWire Press web site for the APS journals (http://www.physiology.org/).

"APS also believes that coercion is an unacceptable means of effecting change."

APS believes that the proposed boycott ignores the diligent efforts of nonprofit scientific publishers to make their content freely available to the public in a timely fashion while still covering the real costs of producing high-quality journals. APS also believes that coercion is an unacceptable means of effecting change. It would be preferable for the representatives of PLOS to meet with the nonprofit publishing community to discuss how best to attain their goals. Just as with E-Biomed, the ideas advocated by PLOS are more likely to be adopted through constructive discussions rather than by the threat of a boycott. In the mean time, APS strongly urges our members and authors not to sign the boycott letter. After all, there is no such thing as a free lunch. ❖

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APS Member Obituaries on Web

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Martin Frank Receives Distinguished Alumnus Award

On March 23, Martin Frank returned to his Alma Mater, University of Illinois, Urbana, to receive the Department of Molecular and Integrative Physiology's Distinguished Alumnus Award. The presentation was made during the Department's annual retreat, held at the Beckman Institute.

In presenting the award, Philip M. Best, Chair, Department of Molecular and Integrative Physiology said, "The Departmental Distinguished Alumni Award was established in 1995 to recognize graduates of our Department who have made significant and lasting contributions to our discipline. Prior recipients include Gerald Wogan, Allan Lefer, Edward Perl, John Greenleaf, and Michael Friedlander.

"It is a great pleasure to introduce this year's recipient of the Distinguished Alumni Award, Martin Frank. Marty received his PhD in 1973 working under William Sleator who was then Department Head. Following postdoctoral work at the Michigan Cancer Foundation, Detroit, and the Department of Pharmacology and Toxicology at Michigan State University, Marty joined the Department of Physiology, George Washington School of Medicine, as an assistant professor. In 1978 he joined the Division of Research Grants at the NIH as Executive Secretary of the Physiology Study Section. While at the NIH he also served as a policy analyst in the Office of the Assistant Secretary of Health. Marty accepted his current position as Executive Director of the American Physiological Society in 1985. As Executive Director, Marty has played a critical role in the Society's efforts to promote physiological science in the national arena. He has been involved in effective campaigns to convince the Congress to increase NIH funding and has played a key role in addressing issues related to animal use that affect our ability to carry out research. Under his leadership, the Society has increased its outreach programs for teachers and students at all levels to improve their understanding of physiological research and its importance to our understanding of the molecular mechanisms of disease. He has also been instrumental in the creation of a new journal, *Physiological Genomics*, that publishes work describing the physiological consequences of gene expression.

Philip M. Best presents APS Executive Director Martin Frank the University of Illinois Distinguished Alumnus Award.

"Marty's activities in science policy and administration have significantly enhanced the stature and impact of our discipline. His contributions benefit all of us who teach and do research in physiology. Thus, it is fitting that we acknowledge him tonight with this award."

Frank's comments upon accepting the award are summarized in the following abstract.

Physiology in Perspective

"In choosing the title, 'Physiology in Perspective,' I was reflecting on Walter B. Cannon's contribution to our understanding of physiology. Cannon incorporated techniques developed by his forbearers to study living organisms at the start of the 20th century. At the start of the 21st century, physiologists have new methodologies and opportunities to put our science in perspective. For the first time since the discoveries made by Watson and Crick, reductionists have yielded ground to those trying to gain a holistic view of cells, tissues, and organisms. Transgenic and gene-targeted mice, and other organisms, are allowing us to study the functions of single genes in a whole organism, thereby relating molecular biology to integrative physiology. The future of physiology appears to be firmly linked to the study of these genetically engineered animal models. The American Physiological Society is playing a role in efforts to put physiology in perspective through its emphasis on research related to physiological genomics and translational physiology. The meetings, publications, and educational outreach efforts of the Society are designed to meet the needs of active scientists and to prepare the next generation of physiologists. The next generation of physiologists will have numerous career options, both in academia and industry. In addition, their paths might lead them into a non-traditional career. Unfortunately, it is impossible to predict which career path a doctoral candidate might take. As Mark Twain noted, 'predictions are notoriously difficult to make—especially when they concern the future!' Had I been able to predict my future, I would have anticipated that I would have become a professor of physiology, teaching and doing research. Instead, my career has followed a path that has allowed me to make contributions to physiology administratively instead of at the research bench. My selection as this year's Distinguished Alumnus demonstrates that success is not defined solely by the number of publications and grants listed on your curriculum vitae, it can also be defined by your influence on your research field." ❖

2001 Undergraduate Summer Research Fellowship Awards

The APS Undergraduate Summer Research Fellowships program made 12 awards for the summer of 2001. These fellowships support full-time undergraduate students to work in the laboratory of an established investigator. The intent of this program is to excite and encourage students to pursue a career as a basic research scientist.

Selection of awardees was based upon academic merit and availability of appropriate faculty mentors. Special considerations were given to applicants whose socioeconomic background, access to educational opportunities, and other life experiences indicated that they would especially benefit from this program. All applications were reviewed, evaluated, and ranked by the the APS Career Opportunities in Physiology Committee.

The award provides a $2,000 stipend to the student and an unrestricted $500 grant to the faculty sponsor/advisor. Student awardees are eligible for a travel grant of up to $800 to allow them to present their research data at the 2002 Experimental Biology meeting. More information about the fellowship is available at http://www.the-aps.org/education/ugsrf/index.html.

2001 Student Awardees and Hosts

Jennifer L. Barone, Host: *Steven J. Swoap*, Williams College, Williamstown, MA

Kush R. Desai, Host: *Dorothy A. Hanck*, University of Chicago, Chicago, IL

Helen M. Eddy, Host: *Rene J. L. Murphy*, Acadia University, Nova Scotia

Jewell A. Jessup, Host: *Debra I. Diz*, Wake Forest University, Winston-Salem, NC

Roger Kapoor, Host: *Celia D. Sladek*, Chicago Medical School, Chicago, IL

Sanjana T. Karim, Host: *Abu B. Al-Mehdi*, University of Pennsylvania, Philadelphia, PA

Michael A. Llewellyn, Host: *Thomas J. Roberts*, Oregon State University, Corvallis, OR

Manus M. Patten, Host: *John M. Russell*, Syracuse University, Syracuse, NY

Sunita Puri, Host: *Darrell P. Neufer*, Yale University; John B. Pierce Laboratory, New Haven, CT

Vikram J. Vaz, Host: *Charles A. Czeisler*, Harvard Medical School: Brigham & Women's Hospital, Boston, MA

Francisco C. Villafuerte, **Carlos C. Monge,** Universidad Peruana Cayetano Heredia, Peru

Daniel S. Wu, **Klaus W. Beyenbach,** Cornell University, Ithaca, NY

Frontiers in Physiology 2001 Teacher and Research Host Awards

APS is pleased to announce the 2001 Awardees for the ***Frontiers in Physiology: Integrating Inquiry, Equity, and Technology*** summer research program for teachers. This program provides middle and high school life science teachers an opportunity to work in the laboratories of APS members during the summer, attend a retreat to explore inquiry-based teaching, uses of technology in education, and equity issues. Fellows develop inquiry-based science activities and attend Experimental Biology 2002.

More information about the program is available at: **http://www.the-aps.org/education/frontiers/index.htm.**

Frontiers in Physiology 2001 Teacher Fellows and their APS Hosts:

James R. Dandy, Host: *Adrian R. Morrison*, University of Pennsylvania

Lucinda DeMaria, Host: *Ann L. Baldwin*, University of Arizona

Jacqueline G. Domfeh, Host: *Cheryl L. Watson*, Central Connecticut State University

Varnessa P. Dorsey, Host: *H. Fred Downey*, University of North Texas Health Science Center, Ft. Worth

Winifred Freeman, Host: **Michael H. Koval,** University of Pennsylvania

Nelene Harris, Host: **Ronald J. Korthuis,** Louisiana State University Health Science Center

Melinda S. Hausenfluke, Host: *James D. Stockand*, University of Texas Health Science Center, San Antonio

Tanja Horvat, Host: *Virginia L. Brooks*, Oregon Health Science University

Lynette Jackson, Host: *Richard J. Roman*, Medical College of Wisconsin

Theodore Johnson, Host: *Sharon I. S. Rounds*, Brown Medical School

Jennifer Hale Milligan, Host: *Michael E. Soulsby*, University of Arkansas for Medical Sciences

James Pellman, Host: *Vernon S. Bishop*, University of Texas Health Science Center

Sandra Laird Perkins, Host: *Thomas C. Westfall*, St. Louis University

Kimiko K. Sunderland, Host: *Marian R. Walters*, Tulane University School of Medicine

President Submits Budget Proposals
Funding for Medical Research and Life Sciences Detailed

On April 9, 2001 President George W. Bush submitted his first budget proposal for FY 2002, which begins on October 1, 2001. The formal budget submission provided details for the budget outline that was released earlier. Below are selected highlights from the new administration's proposals for specific government agencies that support biomedical and life sciences research.

National Institutes of Health

President Bush's 2002 budget proposal kept his campaign promise to support the doubling of the NIH budget. The President's proposal allocated $23.2 billion dollars to the agency—a 13.4% increase over FY 2002. Even though this proposed funding increase is the largest in the institute's history, it falls $500 million short of the increase that would be needed to keep NIH on the doubling path. APS supports the FASEB consensus conference, which calls on Congress and the President to provide the NIH with $23.7 billion for FY 2002.

Under the proposed budget, NIH would spend $12.5 billion dollars—a 12.6% increase over FY 2001—on Research Project Grants (RPGs). This would give the institutes the ability to fund 9,158 new and competing grants, for a total of 34,090 grants. New grants would average $348,000, a 4.3% increase over the current funding level.

Among NIH's FY 2002 priorities is the study of genetic medicine as a way to identify the relationship between genes and disease progression. This includes a focus on which genes are involved in a disease and how they affect progression, response to therapy, and complications. NIH is also focusing on building a clinical research base that will study how to use the sequenced human genome to develop new therapies.

In addition, $10 million was set aside to establish facilities to provide for the long-term care of chimpanzees no longer needed in research, as authorized last year under the Chimpanzee Health Improvement, Maintenance, and Protection Act.

For additional information concerning the NIH budget, visit http://www.nih.gov/news/BudgetFY2002/index.htm. It provides a press release summarizing NIH's FY 2002 plans, a summary of FY 2001 investments as of April, 2001, and a list of major initiatives that each institute is undertaking.

National Science Foundation

Under President Bush's budget proposal, NSF would receive $4.4 billion for FY 2002, a 1.3% increase. Included in the President's proposed budget is $483,110 for the Biological Science Directorate—a .5% reduction from FY 2001. APS supports the FASEB consensus conference that calls for a 15% increase to bring the NSF, as a whole, to $5.1 billion in FY 2002.

The NSF proposes to increase average grant award size from $110,400 in FY 2001 to $113,690 in FY 2002. However, because of the minimal budget increase, the number of supported researchers will decline from 27,010 to 26,660. In addition, the NSF announced that it will conduct a study with the assistance of US academic research universities to determine whether increasing the average NSF grant size and duration would produce greater efficiency in the research process. The study will try to assess whether time spent in writing proposals detracts significantly from time that could be spent conducting research.

Although NSF was not an administration priority in the FY 2002 budget, there are still indications of concern within the administration. The General Science section of the budget states that for the 2003 budget cycle, the administration will undertake a budgetary review to determine how best to support NSF's budget in a sustained manner over time.

Department of Veterans Affairs

Under the President's proposed budget, VA Research is scheduled to receive $360 million for FY 2002. This represents a $10 million increase, or 2.9% over FY 2001. APS supports the FASEB consensus conference, which calls for the VA Research and Development Budget to be increased by $44 million to $395 million.

NASA

NASA is slated for a 7% budget increase overall, but the administration's request for key biological research programs falls 2.5% below FY 2001 levels. Biomedical Research and Countermeasures, Fundamental Space Biology, and Advanced Human Support Technology total some $141 million in FY 2001 and are the main NASA programs that fund investigator-initiated, peer-reviewed grants. These programs use the space environment to understand biological processes and also support research to ensure that humans can live safely and productively in space. These programs were formerly part of the Office of Life and Microgravity Sciences but have become part of the newly created Office of Biological and Physical Research (OBPR). The FASEB consensus conference recommended a $50 million increase for biological sciences research that encompasses these three programs plus a biotechnology program (housed in another division) for which no breakout of the FY 2002 recommendation was available. For these three programs, however, the administration's request actually represents a $3.5 million decrease.

Another significant issue for biological research at NASA is the prospect of internal budget reallocations to meet space station cost overruns that are now expected to total $4 billion. The Bush administration has instructed NASA to find the additional cash internally. In March the chairman of NASA's space

station biological research project science working group complained to NASA about reports that it planned to cover overruns with cuts in facilities, equipment needed to perform science on the space station. Such cuts would constitute a "betrayal of the public trust" that flies in the face of the scientific rationale NASA used to justify the construction of the space station, according to working group chairman Martin Fettman. ❖

Congress and The President Take Up Stem Cell Research

The 107th Congress and the Bush Administration are currently trying to deal with one of the most controversial and contentious scientific issues of a generation: human embryonic stem cell research. At stake is the question of whether a move will be made to ban these scientific techniques that could have widespread ramifications on potentially lifesaving research.

On April 5, Senators Arlen Specter (R-PA) and Tom Harkin (D-IA) introduced the Stem Cell Research Act of 2001. This legislation is designed to remove the existing statutory prohibition against research that would destroy a human embryo. This provision prohibits the use of federal funds to extract stem cells from embryos. Under the terms of the bill, only embryos from in vitro fertilization clinics could be used for research and donor consent would be required. The bill also instructs NIH and the Department of Health and Human Services (DHHS) to develop procedural guidelines to ensure the research would be conducted in an "ethical and sound manner."

Meanwhile, Senator Sam Brownback (R-KS) and Representative Dave Weldon (R-FL) have introduced a bill that would ban outright both human cloning and human somatic cell nuclear transfer. This would prohibit the derivation of human embryonic stem cells. Most experts oppose cloning a human being as too dangerous, but there is concern that legislative language aimed at prohibiting human cloning would also hinder other kinds of valuable cloning research. The Brownback-Weldon bill would also prohibit the derivation of human embryonic stem cells.

While the Congress has taken steps to address this issue, the new Bush Administration has not acted to regulate this potentially lifesaving technology. On April 19, the DHHS announced the indefinite postponement of the NIH Human Pluripotent Stem Cell Review Group, pending completion of the department's review of the Clinton Administration's stem cell policy. Secretary Thompson said that he expected this review to be completed sometime in early to mid summer. ❖

Gift Planning Opportunities

The American Physiological Society is pleased to invite the membership to consider including the APS in their gift giving plans. Over the last several years, the Society has received donations of land and securities, all of which have been used to launch the Society's various young investigator award programs.

Many options exist if you are interested in including the APS and its Endowment Fund in your financial or estate planning. Some options include:

✺ Immediate Gifts: Cash, gifts of appreciated securities, gifts of closely held stock, gifts of tangible personal property, retirement assets, charitable lead trusts and gifts of real estate.

✺ Life Income Gifts: Gift annuities, deferred payment gift annuities, charitable remainder trusts, charitable remainder unitrusts, and charitable annuity trusts.

✺ Gifts of Insurance: Ownership of life insurance policies can be donated, or the APS can become the beneficiary of policies owned by others.

✺ Designated Gifts: Gifts given to honor or memorialize an individual or an organization and can include scholarships, programs, etc., which are specified for support and named for individuals.

✺ Gifts by Will: Bequests of a percentage of estate, stated dollar amount or specific property or assets.

For more information on gift giving to the APS, please contact Martin Frank, Executive Director (Tel. 301-530-7118, Email: mfrank@aps.faseb.org), or Robert Price, Director of Finance (Tel. 301-530-7160, Email: rprice@aps.faseb.org).

Campaign Against Huntingdon Arrives Here; HLS and Supporters Fight Back

The scorched earth campaign to close down a major British animal testing lab has arrived in the US. Launched nearly a year and a half ago by a small group of animal activists, "Stop Huntingdon Animal Cruelty," or SHAC, now claims to have a network of 10,000 volunteers in Britain dedicated to putting Huntingdon Life Sciences (HLS) out of business within three years. Although the activists nearly succeeded in this goal in January, a US investment banking group stepped in with a last-minute infusion of funds. That group itself has now become a target of SHAC. However, there is a growing appreciation within the British government and the pharmaceutical and biotechnology industries of the seriousness of this situation, and HLS supporters are starting to fight back.

SHAC was founded in December 1999 by a handful of activists who had recently forced a small farm that bred cats for scientific research to go out of business. The activists' battle plan was to "look at the pillars propping up Huntingdon and remove those pillars," according to SHAC co-founder Greg Avery. Avery was quoted in an article that appeared in *The Wall Street Journal* on April 27, shortly after the debut of SHAC in this country.

"It's anarchy one, democracy nil," according to a London securities dealer whose firm stopped handling HLS stock. The dealer spoke with a reporter from the international edition of *Newsweek*, which ran a May 7 article entitled "War on Science." Although SHAC representatives claim to foreswear violence, its supporters have nonetheless conducted systematic harassment and intimidation of employees, stockholders, and business operations of firms that have anything to do with the firm. Huntingdon employees themselves have also been subjected to physical attacks at their homes that have placed them and their families at risk. Masked assailants attacked the managing director of the company; a caustic substance was splashed into the eyes of a senior manager; and the cars of eleven employees were firebombed.

Huntingdon may have been selected as a target because of a prior controversy over its animal care practices. In March 1997, a British television program aired clandestinely made video footage in which HLS employees were seen mistreating animals. The most controversial footage showed an HLS worker punching a beagle, which set off a public uproar in Britain. Two HLS employees were subsequently convicted of animal cruelty. HLS fired one worker and agreed, under threat of losing its testing license, to take numerous steps to ensure humane treatment of animals in its facilities. However, HLS lost business and its financial position was weakened.

SHAC's tactics involve confrontation and intimidation. It started out with demonstrations outside Huntingdon facilities and bombarding its employees with intimidating voicemail and email messages. SHAC obtained the names of businesses and individuals associated with HLS by using public financial records and tips from insiders sympathetic to its cause. The names and addresses of HLS workers and those of its officers, investors, bankers, and brokers have been posted to the SHAC website, published in newsletters, and even printed on stickers that have been plastered around London. The typical message states that these individuals are responsible for animal suffering and death and that SHAC supporters should "Let [them] know what you think of animal cruelty."

Noisy and theatrical demonstrations have been held not only at the offices of banks and brokerage firms but also at the homes of those firms' employees and directors. Individuals who invest in HLS have also been targeted. Various acts of sabotage are either known or believed to be attributable to the SHAC campaign. These include February 2001 demonstrations at British facilities of pharmaceutical companies suspected of being HLS clients, the jamming with glue-dipped cards of numerous cash machines belonging to Huntingdon's bank, and an electronic assault on the web site of the American company that saved HLS from bankruptcy.

As a result of SHAC tactics, by January 2001, investment funds and brokerage houses had largely deserted HLS. Many openly acknowledged concerns about the safety of their employees. At about the same time, the British government came out in support of HLS at the urging of the British pharmaceutical industry. "However [the activists] dress this up, this is a campaign against the whole pharmaceutical industry and new medicines," according to a spokesman for the Association of the British Pharmaceutical Industry who was quoted in the May 7 international *Newsweek* article. It was at this critical juncture in January that Arkansas-based Stephens, Inc., which already had a substantial investment in HLS, stepped in with an eleventh-hour infusion of funds.

The campaign against Huntingdon first came to the US in June 1997, when People for the Ethical Treatment of Animals (PETA) announced that it had video footage of alleged cruelty to nonhuman primates at its New Jersey facility. Michele Rokke, an undercover PETA operative, had obtained the footage while working as an animal technician. PETA started a campaign to convince pharmaceutical companies to sever their business ties with the company. The US branch of HLS counterattacked. It sued PETA under federal anti-racketeering statutes. The turning point

in the legal battle came when Federal Judge Robert G. Doumar rejected Rokke's testimony as untruthful after she denied under oath that she had signed a confidentiality agreement, although the document itself was produced in court, and a personnel clerk testified that Rokke had signed it on her first day at work. HLS later agreed to drop its suit in return for PETA's promise not to disseminate the materials gathered by Rokke and or to infiltrate the company again for five years.

Although PETA remains under that prohibition, the SHAC campaign against Huntingdon has followed Stephens, Inc. to the US. In March, SHAC supporters demonstrated against Stephens, Inc. at a Las Vegas conference for clients of the investment firm. Some 40 activists stood outside the hotel banging drums and waving signs reading "Stephens, Inc. is soaked in blood." A small group also showed up in black hoods in the parking lot of a golf course where Stephens investors were playing. The Stephens Group and Stephens, Inc. responded by filing suit against SHAC, Voices for Animals, Animal Defense League, In Defense of Animals, and several individual defendants because of their "unlawful campaign of violence, intimidation, and harassment directed against [HLS]" and the Stephens Group, as one of the company's significant shareholders. The US subsidiary of HLS subsequently joined the suit. In another development, on April 4, 2001, unknown activists stole 14 beagles from the company's New Jersey facility, and the next day rocks were thrown through the window of a laboratory employee's home and his car was overturned.

However, at the same time, there were signs in Britain that HLS supporters would fight back. In April, in Britain the Association of Medical Research Charities (AMRC) announced that it would stop banking with HSBC because it severed its ties with Huntingdon. The AMRC concluded that the HSBC, which is the world's second largest bank, "could not be relied upon" for support if the AMRC were to be subjected to the same kind of campaign of intimidation. Although the AMRC itself has modest financial assets, its 112 members include large foundations such as the Wellcome Trust, which is one of the world's largest charities. After an exchange of correspondence with HSBC, AMRC chief executive Diana Garnham noted pointedly that "animal rights extremists will see the reaction. . .of banks such as HSBC as a victory and will now move on to other targets."

The British patient's advocacy group Seriously Ill for Medical Research also went on the offensive in March by challenging SHAC protesters to refuse medical treatments developed through animal research. SIMR distributed small cards with a list of life-saving treatments that individuals ought to forego as a matter of principle if they declare themselves to be supporters of animal rights. The release of the cards was timed to coincide with a SHAC March on Parliament. ❖

Rachel Davis is APS-AAAS Mass Media Fellow

The APS AAAS Mass Media Science and Engineering fellow for summer 2001 is **Rachel Davis**. Davis is a candidate for a Master of Science in physiology in Fall 2001 at Indiana University. She is a student member of the APS and a member of the J.B. Johnston Club for comparative and evolutionary neurobiology. Davis is a Phi Beta Kappa graduate of Dickinson College with a BS in biology. She will spend the summer working at *Newsweek* magazine. ❖

Positions Available

Assistant or Associate Professor of Physiology: The Department of Physiology at the University of Texas Health Science Center at San Antonio invites applications for a tenure-track position at the rank of Assistant or Associate Professor. Requirements are a PhD, MD, or equivalent and postdoctoral experience. The successful applicant is expected to establish an independent research program in any area of physiology, including those complimentary to the research strengths of the department (cardiovascular, cellular/molecular, aging). Responsibilities include teaching graduate and professional students. Salary and start-up funds will be commensurate with experience. Send a curriculum vitae and a statement of research goals to John M. Johnson, PhD, Department of Physiology MC-7756, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900. Please have three letters of reference sent to the same address. Web site: http://physiology.uthscsa.edu. [EOE/AA]

Assistant Professor or Instructor of Medicine: The Division of Nephrology and Hypertension at Georgetown University is recruiting a junior faculty member to research isolated, perfused vascular preparations from the mouse, including the renal afferent arteriole. The research focus of the Division is renal mechanisms of hypertension. It has a well-funded faculty in basic and clinical research. The candidate should have graduate and postdoctoral training in renal physiology or other related fields. For further information and consideration, please send a cover letter and curriculum vitae to: Christopher S. Wilcox, MD, PhD, Chief, Division of Nephrology and Hypertension, Georgetown University Hospital, PHC Building, Suite F6003, 3800 Reservoir Road, NW, Washington, DC 20007. Fax: 202-687-7893; email: wilcoxch@gusun.georgetown.edu.

Faculty Position in Physiology at Tulane: Applications are invited for a tenure-track appointment at the rank of assistant professor. Candidates should hold the PhD or MD degree, have a record of excellence in research, and be committed to academic programs in medical and graduate education. Research areas marked for expansion include, but are not limited to, cardiovascular-renal, cellular/molecular, membrane/transport physiology, and functional genomics. The successful applicant will be expected to develop an independent extramurally funded research program. Send a curriculum vitae, a brief statement of research interest, copies of representative publications, and the names of three references to: L. Gabriel Navar, PhD, Chairman, Tulane University Health Sciences Center, School of Medicine, Department of Physiology SL-39, 1430 Tulane Avenue, New Orleans, LA 70112. We will accept applications until a qualified applicant is found. Qualified women and minorities are encouraged to apply. [EOE/AA]

Faculty Position: The Department of Otolaryngology/Head and Neck Surgery at the University of Michigan School of Medicine invites applications for a faculty position at the Assistant Professor level with expertise in membrane physiology as it applies to sensory transduction in the auditory system. The new faculty member will be part of our highly integrated Kresge Hearing Research Institute. A joint appointment in the Department of Physiology is also a possibility. The successful candidate will be a creative scientist with the ability to develop a vigorous independent research program and have a strong interest in graduate education. The applicant must have a PhD, MD, or combined degree with at least three years of postdoctoral experience and a documented record of significant scientific accomplishment as well as promise of continued scholarly achievement. Applicants should send their curriculum vitae, a brief summary of their research interests and future plans, and arrange for three letters of recommendation to be sent to: John C. Middlebrooks, PhD, Professor, Search Committee Chair, Department of Otolaryngology/Head and Neck Surgery, The University of Michigan, 1301 East Ann Street, Ann Arbor, MI 48109-0506. Email: jmidd@umich.edu; Internet: http://www.khri.med.umich.edu. The University of Michigan welcomes applications from all qualified candidates. [EOE]

Assistant Professor: Saint Louis University, a Catholic Jesuit Institution dedicated to education, research, and health care, is seeking applicants for a faculty position in the Department of Pharmacological and Physiological Science at Saint Louis University School of Medicine. The position is a tenure-track appointment at the Assistant Professor or higher level, depending on qualifications and experience. We offer an environment rich in senior level scientific experience, start-up funds, laboratory space, and a record of highly successful and continuing extramural research funding. Preference will be given, but not restricted, to individuals with demonstrated experience in the application of modern techniques in research of the nervous, endocrine, or cardiovascular systems. Interested persons should send a curriculum vitae, three letters of reference, and a description of research interests and objectives to: Dr. Thomas C. Westfall, Professor and William Beaumont Chair, Department of Pharmacological and Physiological Science, Saint Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, MO 63104. Women and minorities are encouraged to apply. [EOE/AA]

Positions Available

Postdoctoral Position in Microcirculatory Physiology The Virginia Commonwealth University Reanimation Engineering and Shock Center (VCURES; http://www.vcures.org) is pleased to announce the availability of a two-year postdoctoral position on the study of skeletal microcirculatory oxygen delivery during hemorrhagic shock. The position is funded by a grant from the Department of Defense. The minimum requirements for the position include a PhD in a biological science or biological engineering discipline. We are particularly interested in individuals with prior training in microcirculatory or spectroscopic techniques. Salary ranges from $28,260 to $30,500, depending on experience. Please send a letter of interest, curriculum vitae, and names and addresses of three references to: Roland N. Pittman, PhD, VCURES, PO Box 980695, Richmond, VA 23298-0695. Women, minorities, and individuals with disabilities are encouraged to apply. [EOE/AA]

Postdoctoral Position in Coronary Angiogenesis: A postdoctoral position at the University of Iowa College of Medicine is available in one of two areas of coronary angiogenesis research. The first concerns angiogenic therapy for ischemic and post-infarcted hearts and includes studies on growth factor and receptor expression and signaling, neoformation of the microvasculature, and myocardial remodeling and perfusion. The second area concerns coronary vasculogenesis and angiogenesis during development, with a focus on growth factor spatial and temporal expression and signaling and on mechanical and metabolic stimuli. Research facilities and environment are conducive to multidisciplinary approaches. Candidates should have a doctoral degree and experience in cell and molecular biology. Applications should be sent to: Robert J. Tomanek, PhD, Department of Anatomy and Cell Biology, 1-402 BSB, University of Iowa, Iowa City, IA, 52242. Email: robert-tomanek@uiowa.edu.

Postdoctoral Fellow/Research Associate: The Division of Neurobiology, Department of Neurology and Neuroscience, Weill Medical College, Cornell University, seeks an individual to join in studies of the physiology and molecular mechanisms by which central neural pathways are neuroprotective and regulate cerebral blood flow. The position requires experience in small animal surgery, electrophysiology (intra- and extracellular recordings of neuronal activity in vivo), and basic histological procedures. Please send a letter of application and curriculum vitae/bibliography to: E.V. Golanov, Division of Neurobiology, Weill Medical College of Cornell University, 411 East 69th Street, New York, NY 10021. Email: egolano@med.cornell.edu. [EEO/AA/M/F/D/V]

Postdoctoral Position in Renal Physiology: Applications are invited for an NIH-funded postdoctoral position to study the purinergic regulation of water transport in kidney. The postdoctoral fellow will be responsible for designing and performing molecular and cell signaling experiments to determine the role of P2Y2-receptor in the regulation of collecting duct water transport in rat kidney. Applicants should be a PhD and/or MD with one to two years experience in molecular (isolation and detection of mRNA and protein, etc.) and/or intracellular signaling (arachidonic acid metabolism, MAP kinases, etc.) studies. Knowledge and/or experience in renal physiology or pathophysiology is an asset. Opportunities are available to learn skilled physiological techniques, such as microdissection and microperfusion of renal tubules, and to interact with other investigators working on transgenic animal models of renal disorders and acute renal failure at the School of Medicine and VA Medical Center. This is an excellent opportunity for someone contemplating a career in renal physiology and/or pathophysiology using a multidisciplinary approach. The position is available from **May 1, 2001**. For consideration, please send a curriculum vitae, a brief summary of statement of research interests and goals, and the names and addresses of three references to: Bellamkonda K. Kishore, MD, PhD, Division of Nephrology and Hypertension, University of Utah Health Sciences Center, 50 North Medical Drive, Room 4R312, Salt Lake City, UT 84132. Email applications are encouraged: Bellamkonda.Kishore@hsc.utah.edu. The University of Utah and the Department of Veterans encourage applications from women and minorities. [AA/EOE]

Investigator/Associate Director of Surgical Research: The Department of Surgery at SUNY Downstate Medical Center is seeking an established investigator with a PhD in molecular biology or physiology preferably with an externally funded laboratory in pancreatic exocrine/endocrine physiology. The individual should have published in peer-reviewed scientific journals. This individual will also be the Associate Director of Surgical Research who will assist in directing laboratory-related functions, supervising personnel, supervise and teach surgical residents and research fellows; develop and supervise techniques, such as cloning expressive and isolation of recombinant proteins, DNA; quantitative PCR, protein biochemistry, and creation of antibodies; and assisting and writing grant applications, as well as serving as a faculty member for residents in the laboratory. Interested candidates should submit their curriculum vitae to: Lauren Urban, Department of Surgery, 450 Clarkson Avenue, Box 40, Brooklyn, NY 11203. Tel: 718-270-2728; fax: 718-270-2826.

Positions Available

Assistant Research Scientist: The Department of Internal Medicine, Cardiovascular Diseases Division, Transgenic Animal Facility, University of Iowa College of Medicine, is seeking an Assistant Research Scientist to develop and integrate new state-of-the-art phenotyping methodologies to the application of transgenic animals and to implement development of those methods in the Transgenic Animal Facility. A person in this classification is required to have the academic knowledge of a discipline generally associated with a doctoral degree or an equivalent professional degree, i.e., MD, DDS, or DVM. In addition, such a person will have demonstrated the ability to plan and execute a research study through some progressively responsible independent research work. Experience with the generation and analysis of transgenic mice and an understanding of basic mouse genetics and whole animal physiology is desired. Please send a resume and cover letter indicating #44487 to: Carol Wehby, Human Resources, Internal Medicine, E400 GH, 200 Hawkins Drive, Iowa City, IA 52242-1081. Women and minorities are strongly encouraged to apply. [EOE/AA]

Assistant/Associate Professor: The Department of Physiology at East Tennessee State University has a tenure-track, 12-month, state-funded position available as an Assistant/Associate Professor. The projected start date is January 1, 2002. This position is revised and re-advertised. Applicants must have a doctoral degree, training or experience in cell and molecular biology, and two years or more of postdoctoral experience. We are seeking an excellent scientist who will complement our existing strengths in the biology of the vascular wall, neural control of the cardiovascular system, membrane ion transport, and epithelial cell biology. Current faculty research involves cellular, molecular, and systems-oriented approaches. The potential to develop and sustain a strong, extramurally funded, independent research program is an important selection criterion. Teaching responsibility will be limited to a team-taught course in Medical Physiology. Collaboration opportunities exist throughout the College and Cardiovascular Research Institute in areas of neurocardiology, atheriosclerosis, and cancer in a growing research community. There is an ample start-up package, excellent benefits, and a competitive salary. The College is nestled in the beautiful, scenic Appalachian Mountains. Candidates should send a letter, curriculum vitae, and the names of three references by **August 1, 2001** to: Dr. William L. Joyner, Professor & Chair, Department of Physiology, James H. Quillen College of Medicine, East Tennessee State University, Box 70576, Johnson City, TN 37614-1708. Phone (423) 439-4729; Email: joynerw@etsu.edu. The review of applications will begin immediately and continue until position is filled. [EOE/AA]

Assistant Research Scientist: The Department of Internal Medicine, Cardiovascular Diseases Division, University of Iowa College of Medicine, is seeking an Assistant Research Scientist to perform basic research to advance knowledge of cellular and molecular mechanisms involved in the function of baroreceptor and cardiac neurons and map the neuroanatomical pathways of these neurons in vivo. The work will require expertise in theoretical and methodological aspects of cellular electrophysiology and confocal microscopy. A person in this classification is required to have the academic knowledge of a discipline generally associated with a doctoral degree or an equivalent professional degree, i.e., MD, DDS, or DVM. In addition, the person will have demonstrated the ability to plan and execute a research study through some progressively responsible independent research work. A PhD in neuroscience or physiology is desired, as is research experience in the area of cellular electrophysiology, neuroanatomical tracing methods, and confocal microscopy. Please send a resume and cover letter indicating #44506 to: Carol Wehby, Human Resources, Internal Medicine, E400 GH, 200 Hawkins Drive, Iowa City, IA 52242-1081. Women and minorities are strongly encouraged to apply. [EOE/AA]

Postdoctoral Position: A Postdoctoral Position is available at the University of Southern California in Los Angeles. Requirements for the position include: 1) the ability to contribute and work independently on interdisciplinary research projects involving bioengineering, behavioral neuroscience, and cardiovascular physiology; 2) extensive vascular surgical skill in rodents and rabbits; and 3) the ability to commute between two research sites, the University of Southern California and the West Los Angeles VA Medical Center. Projects will include the following. 1) The development and implementation of an implantable microbolus infusion pump that will allow in vivo incremental dosing of pharmacological agents by remote activation in conscious, freely moving animals. This technology presents potentially powerful applications in the field of functional neuroimaging, as well as for the characterization of the acute behavioral and physiological effects of pharmacological agents in animal models of human disease. 2) Pre-clinical study of a new technique for measuring cardiac output using a minimally invasive dye-dilution methodology. A PhD in physiology, neuroscience, or bioengineering/biomedical engineering is required. The applicant must be a US legal resident. The position will remain open until **August 1, 2001**. Please email a curriculum vitae and the names of three references to D.P. Holschneider, MD, at holschne@hsc.usc.edu (University of Southern California Department of Psychiatry) or J.M. Maarek, PhD at jmaarek@bmsrs.usc.edu (University of Southern California Department of Bioengineering).

Positions Available

Postdoctoral Position: The Muscle Physiology Laboratory at West Virginia University has a postdoctoral position currently available for a highly motivated individual to study the mechanisms and outcomes of muscle strain injury in rats in vivo. Applicants must have a PhD and/or MD degree, and they must demonstrate the capability to work independently and have a background in biochemistry, neuroscience, exercise physiology, or physiology. Experience in immunohistochemistry and molecular biological techniques is preferred along with knowledge of fibrogenic cytokine biology and inflammation. Interested individuals should send a curriculum vitae, a brief summary of research experience and interest, and three letters of reference by **June 15, 2001** to: William T. Stauber, PhD, Department of Physiology, West Virginia University Health Sciences Center, PO Box 9229, Morgantown, WV 26506-9229. Fax: 304-293-3850; email: wstauber@hsc.wvu.edu. Women and minorities are encouraged to apply. [EOE/AA]

Executive Director: The Association for the Accreditation of Human Research Protection Programs (AAHRPP), recently established to provide independent accreditation reviews of human research protection programs at institutions conducting research involving human subjects, seeks an Executive Director. The Association of American Medical Colleges is coordinating the search for this Director. The position will be based in the Washington, DC metropolitan area and will require a seasoned individual capable of leading the development of this organization, its staff, and the program of accreditation at a critical time for the research enterprise. Applicants must possess the requisite programmatic and management experience and skills to develop and administer a new organization and its program of accreditation. This includes excellent organizational skills necessary to launch this new venture, as well as outstanding writing and verbal communication skills. A knowledge and familiarity with the organization and operation of programs of human research protection and applicable laws, regulations, and policies are required. An earned doctorate in a relevant science is required. Qualifications: 1) PhD or MD (or equivalent earned doctorate; 2) at least 10 years experience in a field of science involving human subjects research; 3) knowledge of and applied experience in the protection of human research subjects; 4) strong budgeting/finance background to include fund raising; 5) demonstrated ability to manage a complex program involving multiple high visibility projects; and 6) proven leadership and management skills, with a track record of strategic thinking and problem solving. To apply, send cover letter, curriculum vitae, and salary requirement to: Association of American Medical Colleges, Attn: HR/AAHRP, 2450 N Street, NW, Washington, DC 20037. Fax: 202-862-6212; email: recruitment@aamc.org. [EOE/AA]

Postdoctoral Position: The Department of Medicine at the University of California, San Diego has a postdoctoral position available starting July 1, 2001, which is renewable for up to three years based on satisfactory performance and availability of funding. The candidate will develop complex numerical models of aerosol transport in the alveolar zone of the lung using computational fluid dynamics (CFD) techniques. Research focuses on aerosol deposition and mixing processes. Documentation of a PhD and/or MD degree is required. Candidates with a background in gas and aerosol transport in the lung and expertise in CFD are preferred. Candidates should send their curriculum vitae along with a description of research interests, career goals, and three letters of reference electronically, by fax, or by mail to: Chantal Darquenne, PhD, Department of Medicine 0931, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0931. Fax: 858-455-4765; email: cdarquenne@ucsd.edu. [EOE]

Postdoctoral Positions in Cystic Fibrosis: Postdoctoral fellows who decide to join the laboratory of Erik Schwiebert, PhD, will be able to choose among various projects related to CFTR physiology, cell biology, and genomics in airway epithelial cells. Our laboratory collaborates with two other laboratories studying CFTR cell biology and immunology/gene expression in the same airway and heterologous epithelial cell models. Alternatively, projects are also in progress to study any and all aspects of purinergic signaling in airway and other epithelial cells from ATP release mechanisms, purinergic receptors, and purinergic-regulated functions in epithelia. Examples of recent research articles and reviews are found in the *Journal of Clinical Investigation*, *The Journal of Biological Chemistry*, and the *American Journal of Physiology-Cell Physiology/Renal Fluid and Electrolyte Physiology*. Our collaborating laboratories are headed by Lisa M. Schwiebert, PhD, and James F. Collawn, PhD. Please feel free to research recent publications from all of us. Newly renovated rooms in Schwiebert's laboratory as well as shared facilities in our collaborating laboratories and the Gregory Fleming James Cystic Fibrosis Research Center at University of Alabama at Birmingham are added attractions. Documentation of a PhD and/or MD degree is required. Expertise in cellular and molecular physiology and/or cell biology is preferred. Send your curriculum vitae with a list of three or more references appended (electronically, by fax, or by mail) to: Erik M. Schwiebert, PhD, Assistant Professor of Physiology and Biophysics, Assistant Professor of Cell Biology, Research Scientist in the Gregory Fleming James CF Research Center, University of Alabama at Birmingham, MCLM 740, 1918 University Blvd., Birmingham, AL 35294-0005. Tel: 205-934-6234; fax: 205-934-1445; email: eschwiebert@physiology.uab.edu.

Positions Available

Postdoctoral Position in Ion Channel Regulation: An NIH-funded postdoctoral position in the Department of Pharmacology at the University of Virginia School of Medicine in Charlottesville, Virginia, is available to study the regulation of low-voltage-activated, T-type, Ca^{2+} channels by protein kinases in both native and heterologous expression systems (*Am. J. Physiol.-Cell Physiol.* 279: C1694, 2000 and 280: C265, 2001). The laboratory employs a combination of electrophysiological, biochemical, and molecular biological techniques in an effort to understand the molecular mechanisms underlying regulation and the physiological role(s) played by T-type Ca^{2+} channels in cell activation. Collaborative interactions with other laboratories that study molecular signaling and ion channel physiology are assured. A recent PhD well-trained in either patch clamp, molecular biology, or protein chemistry is preferred. A strong desire to master a repertoire of new techniques is essential. The University of Virginia in Charlottesville is nestled in the foot hills of the Blue Ridge mountains, yet within 1.5 hours of Washington, DC. The position will be available after **June 2001**. To apply, please send a curriculum vitae and three letters of reference by mail or email to: Paula Q. Barrett, Department of Pharmacology, University of Virginia School of Medicine, 1300 Jefferson Park Ave, Charlottesville, VA 22908. Email: pqb4b@virginia.edu.

Postdoctoral Positions: Two postdoctoral positions are available immediately to study the structure/function and protein-protein, protein-ligand interactions of biologically important molecules. The first position focuses on understanding novel proteins important in eukaryotic DNA replication. The second position is aimed at understanding the function of proteins implicated in the pathology of inherited visual diseases. Both projects are federally-funded and are a collaborative effort between research groups located at the University of Medicine and Dentistry of New Jersey and Thomas Jefferson University (*Biochemistry* 1999, 10919-10928, 10929-10939; 2000, 15879-15886; *Nucleic Acids Res*., 2001, In press). Research facilities and environment are excellent. A recent PhD (0-2 years) with publications and some experience in basic molecular biology, enzymology, or fluorescence microscopy is required. A background in yeast two-hybrid system, biosensors, or yeast genetics is advantageous. Send a resume and three references to: E. Biswas, PhD, Program in Biotechnology, Thomas Jefferson University, 130 South 9th Street, Philadelphia, PA 19107; email: esther.biswas@mail.tju.edu. Or send it to: S. Biswas, PhD, Department of Molecular Biology, University of Medicine & Dentistry of New Jersey, 2 Medical Center Drive, Stratford, NJ 08084; email: biswassb@umdnj.edu; fax: 781-207-8476.

Chair, Department of Physiology and Experimental Medicine, George Washington University Medical Center: Applications are invited from high-energy, results-oriented individuals to fill the position of Chair of the Department of Physiology and Experimental Medicine at the George Washington University Medical Center. The Department Chair will report directly to the Dean of the Medical School. This recruitment provides an excellent opportunity to bring together a high-quality faculty, which can interact with colleagues in other basic science laboratories, and collaborate with clinical investigators in transitional research efforts. The successful candidate will have academic credentials that would qualify for an appointment at the level of Professor, a track record of successful and productive collaborative research efforts, the ability to recruit and retain talented faculty, and a history of successful mentoring and training of junior faculty and students. The review of applications will begin **June 22, 2001**, and will continue until the position is filled. Nominations and applications (including curriculum vitae) can be submitted in confidence to: Harry Wollman, MD, Principal, Alexander, Wollman & Stark, 1601 Market St., Suite 550, Philadelphia, PA 19103. Email: pkstark@aol.com. [EOE/AA]

Postdoctoral Associates: The College of Health and Human Performance at the University of Florida is seeking 2 postdoctoral associates (non-tenure track positions) to conduct research in skeletal muscle physiology, biochemistry, and molecular biology. The successful candidates should have a strong research interest in skeletal muscle physiology, biochemistry, and gene expression. Specifically, a well-qualified applicant should have research knowledge and experience in performing biochemical and molecular laboratory biology procedures. Candidates must have earned a PhD degree in physiology/exercise physiology, biochemistry/molecular biology, or a related basic science degree. The salary will be $28,000 for 12 months (with possible renewal annually for up to three years). The effective date of employment is August 1, 2001. Application deadline is **August 1, 2001** or until position is filled. To apply, please send a letter of application, resume, transcripts, and three letters of recommendation to: Scott K. Powers, PhD, Professor and Director, Center for Exercise Science, Department of Exercise and Sport Sciences, University of Florida, PO Box 118206, Gainesville, FL 32611. Tel: 352-392-9575, ext. 1343; email: spowers@hhp.ufl.edu. [EEO/AA]

Positions Available

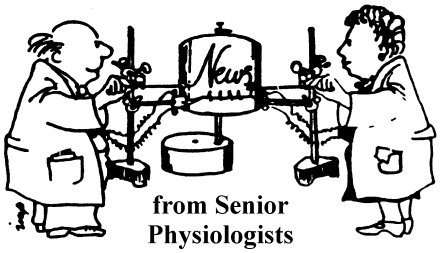
Postdoctoral Fellow in Cardiovascular and Renal Physiology: A Postdoctoral Fellowship is available to study the role of endothelial-derived vasoactive factors in the control of renal hemodynamics and excretory function and their involvement in the pathophysiology of hypertension. Candidates must have a PhD and/or MD and should be self-motivated with strong background in integrative physiology experiments using animal models. Please send a cover letter, curriculum vitae including the names of three references, and a statement of research interests to: Dewan S. A. Majid, MD, PhD, Associate Professor, Department of Physiology SL-39, Tulane University Health Sciences Center, 1430 Tulane Avenue, New Orleans, LA-70112, USA. Fax: 504-584-2675; email: majid@tulane.edu. [EOE/AA]

Associate Lecturer (Ref: A27/01): The Department of Physiology at the University of Western Australia seeks high-quality candidates for a tenurable position who are able to begin duties in 2001. The successful applicant must have a proven record in research or proof of potential research excellence and be able to demonstrate an ability to teach general physiology to undergraduates in science, medicine, and dentistry. The successful applicant's research will employ modern techniques in the pursuit of questions of relevance to areas of current research strength in the Department. Details of current research and teaching activities in the Department are available on the Department's web site (http://www.physiology.uwa.edu.au). All applications must address the selection criteria obtainable on the website. Applicants with teaching experience are requested to submit a teaching portfolio as part of their application. For further information and copies of the selection criteria please contact Associate Professor Howard Mitchell, Head of Physiology on 9380 3314, email ophysiol@cyllene.uwa.edu.au, or web http://jobs.uwa.edu.au/. The salary range for an Associate Lecturer Level A is $36,512-$49,549 (Australian) per annum (minimum starting salary for appointee with a PhD will be $46,160 per annum). Closing date: **June 1, 2001**. Benefits include generous superannuation, fares to Perth (if applicable) for appointee and dependent family, removal allowance (if applicable), study leave, and long-service leave. Conditions of appointment will be specified in any offer of appointment that may be made as a result of this advertisement. Written applications quoting reference number, telephone number, qualifications, and experience and the names, addresses (including email), and fax/telephone numbers of three referees should reach the Director, Human Resources, The University of Western Australia, 35 Stirling Highway, Crawley WA 6009, by the closing date. The University promotes a smoke-free work environment. [EOE]

Biological Science Assistants: The US Army Research Institute of Environmental Medicine (USARIEM) in Natick, MA has multiple positions available for qualified Biological Sciences Assistants. USARIEM conducts basic and applied research concerning optimization of performance under stressful conditions and avoidance of associated medical problems. The positions require enlistment into the US Army for six years with the assignment at USARIEM, which is in the Boston suburbs. Educational requirement is a Bachelor's or Master's Degree in biology, physiology, microbiology, exercise science, nutrition, biomechanics or biochemistry. Applicants should have a history of high academic achievement and be highly motivated. Previous experience as a research technician employing procedures related to either human, animal, tissue and/or molecular research is desired. Benefits include student loan repayment of up to $55,000, housing, medical care, graduate educational opportunities, as well as excellent research experiences in a variety of scientific disciplines, including environmental and exercise physiology, nutrition and metabolism, pathophysiology, genomics, and molecular biology. The open positions are located in the Military Performance Division, Military Nutrition Division, and Thermal and Mountain Medicine Division. Candidates can obtain further information by sending a letter of interest and resume or CV to: Dr. Kent B. Pandolf, Senior Scientist, US Army Research Institute of Environmental Medicine, Natick, MA 01760-5007. Tel: 508-233-4832; Email: Kent.Pandolf@na.amedd.army.mil.

Postdoctoral Position in Cardiovascular Neurophysiology: A postdoctoral position is available immediately to study autonomic regulatory neurons in the hypothalamic paraventricular nucleus. Studies will focus on defining synaptic mechanisms and intrinsic membrane properties of specific groups of projection neurons capable of influencing autonomic nervous system activity. Special consideration will be given to applicants with experience and/or a strong desire to learn rodent surgery, drug microinjection techniques and/or whole-cell voltage and current clamp recordings in brain slices. A competitive salary and benefits package is available. Interested individuals should send a curriculum vitae and the names and addresses of references to: Glenn M. Toney, Department of Physiology, 7756, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900. Tel.: 210-567-4372; email: toney@uthscsa.edu. [EOE/AA]

Letters to Michael Bárány



Maximo Deysine writes: "Away from the pressures of the Darwinian struggle and with my basket of appetites reasonably filled with successes and failures, I look back and realize that the knowledge of Physiology was a life-long devoted friend.

"It all started way back in Buenos Aires, Argentina when my high school biology teacher enthusiastically introduced me to the wonders of life and I became addicted to physiology. Through all my life and in spite of many attempts at rehabilitation, I continued falling into the pleasurable mysteries of cell function. Wrapped by this addiction, during Medical School I became chief instructor at the Physiology Department of the University of Buenos Aires School of Medicine under the direction of Dr. Bernardo Odoriz. In that heady den I shared responsibilities with my dear friend Dr. Guillermo Pilar, who later shined in neurobiology. During those ecstatic years, our daily subject of conversation, when not directed to dealings with the opposite sex, was about the then incipient studies on cell biology. In 1954, President Juan D. Peron expelled us all from the department and later Dr. Bernardo Houssay reinstated us with all due glory. Politics can't stop an addiction and my colleagues continued the road of Physiology and I, interested in applying those concepts to the care of surgical patients, took a fork towards surgery.

"My surgical career was a futile attempt to abandon my habit. Unable to change courses and craving for answers, I started to investigate problems dealing with surgical infections, particularly the diagnosis of abscess with radioisotopes. Later on, I participated in intensive care, which is an advanced course in clinical physiopathology. There I learned that every failure at human resuscitation from septic or hemorrhagic shock was associated with our ignorance about some form of cellular function, stressing the need for further research. Finally, I have specialized in the care of patients suffering from infected meshes utilized for hernia repair and this is where I am now. In reality, all forms of rehabilitation failed and I find myself constantly hungry about the marvelous complexity of life. With age, my surgical practice has declined but my interest in surgical physiopathology remains as keen as when I was a student.

"Yes, my dear colleagues, the bean counters can force you to retire, but if you continue to be interested in your primary love, your mental professional life will continue. All you need is some kind of connection with the subject of your adoration, a library, and questions. Humans start to die when they stop asking questions.

"I firmly believe that physiology is the basis for the understanding of disease so I continue teaching medical students, trying to set their brains on fire like that biology professor did to me. How to do it depends on your relationship with them and the intensity of your inner blaze. You will not always succeed but the few times you do will be unforgettable. It is, however, disturbing to discover that some students will graduate with minimal interest and knowledge about cell function and I doubt the wisdom utilized when they were screened for entrance into Medical School. Medicine should be a course given for compassionate individuals interested in advanced human physiopathology.

"Today, my activities range from the actual repair of a hernia to academic teaching at Congresses, etc. My obsession with physiology provides me with a seemingly interminable number of subjects to write about so I keep trying to persuade faceless editors to publish my papers—a task I often find frustrating. My two sons are surgeons and chatting shop with them is a great source of pleasure as they pretend to listen to my unrequested clinical advice. Four grandchildren provide me with a feeling of perpetuity.

"To survive aging you need a hobby and during the cold winter evenings I carve walking sticks from dry oak branches and then physiology follows me into my basement and the wood becomes alive with precious lignin and its cellular surroundings. I also make stained-glass windows and I force my friends to accept them. It gives me pleasure to know that something made by me will remain with the living. During warm days, pretending to play golf provides a much needed break from dealing with the human suffering associated with the practice of surgery.

"The biology professor who started my addiction, cunningly like all dealers, manipulated me into entering a life of great pleasure driven by the never-ending quest to solve the mystery of life. He was my real teacher.

"My advice to those who reach my age is two-fold. First, rejoice upon the fact that no one reaches a true pinnacle; the joy comes from the privilege of participating in the contest even if that includes some loses. Second, refuse to retire by always pursuing your forever lasting first love."

Bill Sawyer writes: "Thank your for your letter reminding me of the rapid flight of time and asking for a note for "News from Senior Physiologists." It is still hard for me to believe that it has been 10 years since the then-mandatory retirement age came and I shut down my lab at Columbia University College of Physicians and Surgeons and migrated west. I am also surprised to realize that my publication list has grown by 30 papers since I retired. This does not

reflect continued productivity, but that I had pharmacological data on hundreds of synthetic peptide analogs of the neurohypophysial hormones that Maurice Manning's group in Toledo had synthesized during the 24 years of our collaboration. Although we had published over 100 papers on these before I retired, many promising peptides remained unreported. Some of these served as lead compounds for subsequent syntheses of more interesting peptides. Manning now has the pharmacological support of my first graduate student, W.Y. Chan, of Cornell Medical School, and my superb former chief technician, N.C. (Becky) Wo. They continue to characterize new neurohypophysical hormone analogs from Manning's group. It is really gratifying to find that I remained such a productive investigator long after leaving the lab.

"A high point of my post-retirement years came when Bill Dantzler, Hiroko Nishimura, and Peter K.T. Pang arranged a symposium and dinner to honor my retirement at the FASEB meeting in Anaheim in 1992. A number of my old friends, students and collaborators were there, including Bodil Schmidt-Nielsen, Arthur W. Martin, W. Francis Ganong, Serge Jard and John Blair-West, to name a few. I certainly found it a bit overwhelming that this party included two Past-Presidents and one President-elect of the APS, and colleagues from France and Australia. Many there had known me as a comparative physiologist and endocrinologist and not merely as a pharmacologist. I had, in fact, been involved in physiological research for almost 50 years, starting as a college undergraduate doing a thesis project under the late Carroll M. Williams. I did graduate work with Frederick L. Hisaw and was a faculty member in Homer W. Smith's department at NYU. I nominally became a pharmacologist when I joined H.B. van Dyke's department at Columbia P&S and learned to apply pharmacological techniques to the study of the evolution of active neurohypophysial peptides. This interest, in turn, lead to my association with Manning and the rest is history.

"The moral of this story, if any, is that one should find something one enjoys doing and then to follow one's instincts. It certainly worked for me. It also surely helped to have had such great teachers and role models and to have had consistent generous support from the NSF and the NIH."

Piero P. Foa writes: "Thank you for your kind wishes on behalf of the American Physiological Society. I have no words of wisdom, but I cherish the opportunity to reflect upon the events of my 90-year long life, extended through oral history and family memorabilia by the experiences of my grandfather Pio and of my father Carlo. My title will be 'No, Chicken Little, the sky is not falling.'

"Pio Foa was a professor of Pathologic Anatomy at the University of Turin, Italy at a time when, in many cases, only an autopsy could confirm the cause of death. Today, most autopsies are rendered obsolete by current diagnostic techniques and are things of the past (except in forensic cases). Nevertheless, many old timers expected the sky to fall, but it did not.

"Pio's tools were the microscope and the paraffin baths and, when my father Carlo, professor of Physiology at the University of Milan, relegated them to a remote corner of the lab to make room for a brand new 24-speed kymograph, the histologists thought that the sky would fall down, but it did not.

"And when the kymograph and the smoked drum gave way to the polygraph and the mercury column gave way to the sphygmomanometer and the students took the place of the dogs, some of us asked how could one become a doctor without some hands-on experience with a beating heart or a secreting pancreas. Surely the sky would fall, but it did not.

"And when the students discarded their surgical gloves for the chromatographic plate to learn the meaning of DNA, some of us who went to school when the textbooks of Biochemistry mentioned nucleic acids only in a footnote, worried lest the forest be lost not for the trees, but for the underbrush. Surely the sky would fall, but it did not.

"And when aches and pains force us nonagenarians to seek our doctor's advice and to navigate the alphabet soup of HMO, CEO and CPA, we wish that the body politic would come to its senses, for surely now the sky is about to fall, but so far, it has not.

"And when our lecture halls will be used only for ceremonial occasions and our students will be able to listen to the best professors in the world on a CD-ROM in the convenience of their homes, surely something intangible will be lost, but the sky will not fall.

"Nor will the sky fall as long as our students will continue to discover things that we, their teachers, will not fully understand.

"How do I keep busy? Family, friends, travel, concerts, endocrinology seminars and some bench work on a novel, potent insect repellant (believe it or not, the idea struck me in a dream!)

Letters to G. Edgar Folk

Howard Lowensohn writes: "Thank you for your letter regarding my present activities. I can't believe that it has been almost seven years since my retirement began. There has never been a dull moment, but not any very high points either. We have the grandchildren and their family and our friends whom we see, some here and some in New England. I have gotten into finances and that does occupy a considerable amount of my time. We do listen to our peers and exercise consistently by walking and swimming. The most important matter is that my wife, Martha, and I

remain in good health. We moved to Bradenton, FL about four years ago and live in a gated community with no residency age requirements. We spend the summers on Cape Cod. Sadly, I have gotten away from science. I do try to read and follow the literature via *Grateful Med* and several recent textbooks and very occasional correspondences with past colleagues. I undertook the cataloguing, editing and submission of 36 notebooks of notes for a book on the coronary circulation that was being written by Dr. Donald E. Gregg, prior to his death, for submission to the National Library of Medicine. Your letter mentioned about seeking archival repositories for a life's works. I tried this, while still working, for the deposition of other's works.

"Sadly, it is very difficult and I found that there was no national policy on this matter. Seeking local assistance might unload the shear weight of the material, but subsequent location or knowledge of the material's existence might prove to be a formidable task. My only advice to those coming along would be to always prepare for tomorrow, whether that be retirement, or the possibility that one's present pursuits may fall victim to a change in scientific priorities. I question whether my contribution should appear in *The Physiologist*. One more point: I feel strongly that the American Physiology Society should sponsor some memorial event, on a yearly basis, for Dr. Donald E. Gregg. We all owe him a great debt of gratitude for essentially starting the coronary physiology discipline as we know it today. He commenced this work in the laboratories of Dr. John Carl Wiggers and carried it forth in his own laboratories for many years. Besides his national and international scientific recognition, he personally received a citation from President John F. Kennedy for his contributions as an outstanding scientist. The latter information is included in his memorial dedication in *The Physiologist* (1984 or 1985)."

Arthur S. Leon writes: "Thank you for your inquiry. I am still active in academics with no plans to retire in the immediate future. I am an endowed professor at the University of Minnesota and the Director of the Laboratory of Physiological Hygiene and Exercise Science (originally founded by Ancel Keys in 1938). My professorship is name in honor of Henry L. Taylor, Ancel Keys' first PhD and a deceased member of APS. Incidentally, Ancel, who is age 97 years and an emeritus professor, just received another honorary doctorate degree and is still actively analyzing data from his Seven Countries' Study with a major publication last month from this study in *Preventative Medicine.*

"My major research effort is as a PI in the multicenter HERITAGE Family Study. The purpose of this study is to investigate the interactions of exercise training and genetics on risk factors for coronary heart disease and diabetes. This study involves about 800 members of 204 families. We are currenlty in the ninth year of NHLBI funding and based on a recent study committee evaluation score, we expect an additional four years of funding primarily for molecular biology studies. This project recently received the International Olympic Committee's President's award in exercise science. I am also PI or co-investigator on several other major grants and an active contributor to the scientific literature, including first authorship on six papers in refereed journals this past year."

Letter to Eugene Renkin

Maurice B. Burg writes: "Thanks for the personal 70th birthday greeting. I feel rewarded to have survived to become a "Senior Physiologist." My wife, Ruth, also has an important birthday at this time, and we decided to celebrate in the spirit of biological science by taking the whole family (including children and grandchildren) on a cruise to the Galapagos next month.

"Age aside, nothing much has changed for me professionally. I continue to administer my laboratory, train postdoctoral fellows, and struggle to remain current in my science. My main interest remains the consequences to renal medullary cells of osmotic stress, both the dangers that high and variable salt and urea pose and the adaptive responses of the cells.

"I have no special words of wisdom. Science is still great fun for me and I intend to continue in science as long as it remains fun."

Letters to Novera Herbert Spector

Dexter M. Easton writes: "You are doing a good service—checking up on us old-timers born in 1921. I will be 80 this September and I recall receiving a request a while ago (for the 75th?). In response, I noted at that time that I had retired in 1982 under the terms of a generous program (evidently too generous, for it was terminated after one year) that allows me to continue with eternal tenure at half-time employment in the Department of Biological Sciences at Florida State University (FSU).

"I continue to teach one course in the fall semester. It is essentially a laboratory course in "Experimental Physiology" that offers me a chance to indulge my long-time interest in "old-fashioned" electrophysiology and keep in touch with younger students. I developed, for example, some special arrangements that improve the reliability of recording action potentials from frog sciatic nerve. Last year I developed a Web lesson that shows examples of recordings using that method to illustrate what the student ought to, but often does not find (http://www.bio.fsu.edu/faculty-easton_actionpotential.htm). Composing and drawing the 30 or so figures gave me a feeling of artistic accomplishment.

"My main scientific concern has been to convince my colleagues of the virtues of Gompertz kinetics as a modeling tool for many natural processes. According to the classical Gompertz survival

model, the number of survivors in a population decreases exponentially at an accelerating rate with age. This might be of some concern to those in our age bracket. In the case of aging Mediterranean fruit flies and for very old humans, I find that a more accurate model posits that the number that die increases exponentially at a decelerating rate (Easton, D.M., *Theoret. Pop. Biol.*, 48, 1995; *Exp. Geront.* 32, 1997). That model also describes well the survival of cells subject to increasing doses of X-rays (Easton, D.M., *J. Theoret. Biol.*, 196, 1999).

"But my greatest interest in Gompertz kinetics is that the concept of exponentially changing rate constant (the special feature of Gompertz kinetics) makes possible accurate and computationally efficient prediction of nerve axon membrane currents, synaptic currents and diverse pharmacokinetic phenomena. My current jousting seeks to convince conservative reviewers of my offerings, concerned with these three topics, that this is a rational viewpoint. The outlook is also useful in many other situations that still remain to be examined.

"I do find time for other activities. At the behest of my wife, I am happy to assist in the activities of the Unitarian-Universalist Church and the League of Women Voters.

"With three of our four children living nearby in Tallahassee (the fourth pursues computer networking in California), and with four grandchildren, we do not want for family interaction.

"The younger people in science are smarter than I am. I try to keep up, because I have not fulfilled the promise of my youth (and I have to be able to pay for health insurance), but it is an impossible task. Maybe I have gained wisdom, but wisdom, it seems, cannot be passed on. It seems to stay in the heads of the old, while the young find their own way. But if advice is wanted, what better than to say: learn what you are able about whatever you can when you are young. Then you have many options when you are older. Eat to live and do not live to eat; hold to a simple program of regular exercise to keep your cardiovascular system in good shape. I "run" a couple of miles around the neighborhood every day, trying to keep up with our excessively energetic Jack Russell Terrier that my wife bought in an unguarded moment. That helps keep my head clear and maybe reduces my blood pressure.

"While I'm dispensing free advice, let me suggest avoidance of automobile transportation. For the last 10 years or so I have used the city bus system and walked at both ends of the route, from my home to the lab. Prior to that, for two or three decades, my bicycle and I competed, in an unfair contest, against city traffic. I like to think both the planet and myself are better off because I so seldom use our car.

"I have no objection to sharing these thoughts with the readers of *The Physiologist*. I enjoy reading in that journal about the activities of others of my ilk."

Richard L. Riley writes that he has doing well and is still interested in respiratory physiology, as witnessed by his most recent publication, "What Nobody Needs to Know About Airborne Infection" (*Am. J. Respir. Crit. Care Med.*, 163:7-8, 2001).

Wells E. Farnsworth writes: "Thank you so much for inviting me to share with my current activities and thoughts.

"Since I retired in 1991 from the Chicago College of Osteopathic Medicine (now a unit of Midwestern University) where, for eight years, I chaired the Department of Biochemistry, the Department of Urology of Northwestern University Medical School kindly appointed me Adjunct Professor of Urology. Having known for 30 years Prof. John Grayhack, as Chairman of Urology, and Dr. Chung Lee, Director of the Urology Research Lab, and having conducted research on the physiology of the prostate for some 50 years, this was, for me, a coming-home.

"In the years since joining Northwestern Medical School, I think I have published at least one review type paper in some aspect of prostate physiology per year. In addition, I prepared two more philosophical studies, one on "Why We Breathe," and the other on "Pitfalls of Creativity." The latter was an attempt to project what Columbus might now write as an NIH proposal for his explorations. In addition to these papers, I have written several letters to the editor of *The Scientist* on various aspects of education. At present, I am assembling a review of the different mechanisms of sodium pump activity, especially in kidney, GI tract, red cell, and, most interesting, the eye, in an effort to upgrade the badly neglected study of pump activity in the prostate. My fascination with the eye is a consequence of my loss of vision in my right eye due to glaucoma.

"Besides my scientific efforts, I continue to serve as a volunteer tutor, conducting three five-week, four hours/week sessions in Problem-Based Learning for the Department of Medical Education. Working with six to nine, usually second year, medical students, we try to illuminate the basic science principles underlying the disease process and its manifestations through study of clinical cases.

"Finally, I must mention that, during this last year, I have tutored a second grader in reading. He came to me badly handicapped by dyslexia. I spent half an hour three times a week, using the *Hooked on Phonics* program. Since he knew that I am a retired scientist, he was intrigued and further motivated by my conducting simple high school physics experiments on light, heat and

motion for him. According to his parents, he is now right up with his class and just loves books.

"In closing, let me say that I have long recognized that I am a misfit scientist since I have chosen to pursue basic biological principles despite their being unfashionable. I hope, and continue to believe, that what I have done is important.

"My thanks to you and the APS for giving me this opportunity."

Principles of Integrative Environmental Physiology

G. Edgar Folk, Jr., Marvin L. Riedesel, and Diana L. Thrift
Bethesda, MD: Austin & Winfield, 1998, 502 pp., illus., index, $62.95.
ISBN: 1-57292-109-9

This text, intended for use in a one-semester course in environmental physiology, is an updated version of the 1974 benchmark *Textbook of Environmental Physiology*. One of the stated goals was to update the extensive bibliography to reflect recent developments in the field. Certainly, much progress has been made in environmental physiology since the *Textbook of Environmental Physiology* was published. For example, *Human Performance Physiology and Environmental Medicine at Terrestrial Extremes*, a 1988 monograph by physiologists from the US Army Research Institute of Environmental Medicine, reviewed most of the pertinent literature to 1988. In the past decade, knowledge about mammalian responses to various environmental stressors has increased rapidly. Thus, it is exciting that a new textbook has been published that will bring together many of the developments of the last 10 years in environmental physiology and relate these recent findings to the literature published 30-50 years ago.

However, the *Principles of Integrative Environmental Physiology* and the earlier *Textbook of Environmental Physiology* are quite similar. Although 25 years have elapsed since the original text, paragraphs are repeated verbatim and at times recent data are lacking. For example, no mention is made of the studies of Young et al. (*J. Appl. Physiol.* 60:1542-1548, 1986) and Bittel et al. (*J. Appl. Physiol.* 62:1627-1634, 1987) describing the various mechanisms (metabolic, insulative, habituation) by which human beings acclimate to cold environments. The chapter on non-shivering thermogenesis presents no new information. Also, in addition to referring readers to the *Handbook of Physiology* for comprehensive reviews, it would be helpful if more primary literature was cited.

In a section on glycerol hyperhydration, the authors describe various studies from their own laboratory that demonstrate an effect of glycerol-induced hyperhydration on thermoregulation and cardiovascular adjustments during exercise. They also reference a study by Latzka et al. (*J. Appl. Physiol.* 83:860-866, 1997) but do not mention that this study, in contrast to their own work, found no effect on thermoregulation after glycerol-induced hyperhydration. It would have been helpful to compare and contrast these studies, deconstruct the experimental designs, and possibly elucidate why differences have been observed.

One of the strengths of this textbook is the inclusion of older literature that is not found in recent texts. This gives the reader an historical perspective that, frankly, is not taught to students these days. Many modern students do not have an appreciation of "personality driven" science by such luminaries as Dill, Krogh, Nielsen, and Hill. This textbook presents earlier studies and provides insight into the forefathers of environmental physiology. The book is divided into the most common environmental extremes encountered by humans and animals (heat, cold, altitude, radiation, hyperbaria) with other chapters devoted to biological rhythms, temperature regulation, and pollution. The book is easy to read, leaves space for notes in the margin, and has numerous figures to allow the reader to grasp concepts.

Given the depth of literature presented before 1970, this book is particularly recommended for students unfamiliar with earlier studies in environmental physiology. It would be a good textbook for the advanced undergraduate or the graduate student with little background in environmental physiology, particularly when supplemented with reviews of recent literature.

Reed W. Hoyt
and John W. Castellani
US Army Research Institute
for Environmental Medicine

Books Received

Computerized Data Acquisition and Analysis for the Life Sciences: A Hands-on Guide.
Simon S. Young.
New York: Cambridge Univ. Press, 2001, 237 pp., illus., index, $29.95.
ISBN: 0-521-56570-7.

Epilepsy and Sleep: Physiological and Clinical Relationships.
Dudley S. Dinner and Hans O. Lüders (Editors).
San Diego, CA: Academic, 2001, 300 pp., illus., index, $99.95.
ISBN: 0-12-216770-8.

Handbook of Gynecological Oncology.
Mahmood I. Shafi, David M. Luesley, and Joseph A. Jordan.
Philadelphia, PA: Churchill Livingstone, 2001, 336 pp., illus., index, $49.00.
ISBN: 0-443-06397-4.

I of the Vortex: From Neurons to Self.
Rudolfo R. Llinás.
Cambridge, MA: MIT, 2001, 302 pp., illus., index, $27.95.
ISBN: 0-262-12233-2

Measurement of Human Locomotion.
Vladimir Medved.
New York: CRC, 2001, 265 pp., illus., index, $99.95
ISBN 0-8493-7675-0.

Nerve and Muscle, 3rd. Ed.
R.D. Keynes and D.J. Aidley.
Studies in Biology.
New York: Cambridge Univ. Press, 2001, 188 pp., illus., index, $19.95.
ISBN: 0-521-80584-8.

Outline of Oncology Therapeutics.
Mark J. Ratain, Margaret Tempero, and Consuelo Skosey.
Philadelphia, PA: Saunders, 2001, 288 pp., illus., index, $49.95.
ISBN: 0-7216-8123-9.

Pain Imaging.
Kenneth L. Casey and M. Catherine Bushnell (Editors).
Progress in Pain Research and Management, Vol. 18.
Seattle, WA: INASP, 2000, 260 pp., illus., index, $89.00.
ISBN: 0-931092-34-5.

The Psychobiology of the Hand.
Kevin J. Connolly, Editor.
New York: Cambridge Univ. Press, 1999, 286 pp., illus., index, $69.95.,
ISBN: 1-898-68314-X.

Psychophysiology: The Mind-Body Perspective.
Kenneth Hugdahl.
Perspectives in Cognitive Neuroscience.
Cambridge, MA: Harvard Univ. Press, 2001, 429 pp., illus., index, $27.95.
ISBN: 0-674-00561-9.

Review of Medical Physiology, 20th Ed.
William F. Ganong.
New York: McGraw Hill, 2001, 871 pp., illus., index, $44.95.
ISBN: 0-8385-8282-6.

People & Places

Fishman Receives American Lung Association Medal

Alfred P. Fishman, Associate Dean for Program Development at the University of Pennsylvania School of Medicine and the 56th APS President, is the 2001 recipient-designee of the Edward Livingston Trudeau Medal of the American Lung Association. The Trudeau Medal was established in 1926 in honor of the first President of the American Lung Association and is presented annually for major scientific contributions to the prevention or treatment of lung disease. The Trudeau Medal is internationally regarded as the highest honor awarded to a pulmonary physician or scientist.

For 20 years, Fishman served as Chief of the Cardiovascular-Pulmonary Division at the University of Pennsylvania. As the Principal Investigator of a Specialized Center for Research, a Program Project, an Institutional Training Grant, and several individual research grants, Fishman initiated the modern era of NIH-funded pulmonary and cardiovascular-pulmonary research in the Department of Medicine at the University of Pennsylvania. He also mentored a remarkable number of future leaders in academic medicine.

Alfred P. Fishman

Fishman received the award at the International Meeting of the American Lung Association and the American Thoracic Society in San Francisco on May 20. ❖

Kudos to Vander, Sherman, and Luciano

After 30 years of enlightening undergraduate and graduate physiology students with their text, *Human Physiology: The Mechanism of Body Function*, Arthur Vander, James Sherman, and Dorothy Luciano are retiring. They have entrusted the book's continuation to a trio of APS members: **Eric Widmaier** (Boston University), **Hershel Raff** (Medical College of Wisconsin), and **Kevin Strange** (University of Wisconsin-Madison). Best wishes to Drs. Vander, Sherman and Luciano in their future endeavors! ❖

APS Members Elected to National Academy of Sciences

The National Academy of Sciences announced the election of 72 new members and 15 foreign associates, in recognition of their outstanding achievements in research. Among those elected are two APS members, **John H. Exton**, and **Lynn T. Landmesser**.

Exton is an investigator with the Howard Hughes Medical Institute and Professor of Molecular Physiology and of Pharmacology, Vanderbilt University, Nashville, TN.

Landmesser is Professor and Chair, Department of Neurosciences, Case Western Reserve University, Cleveland, OH. ❖

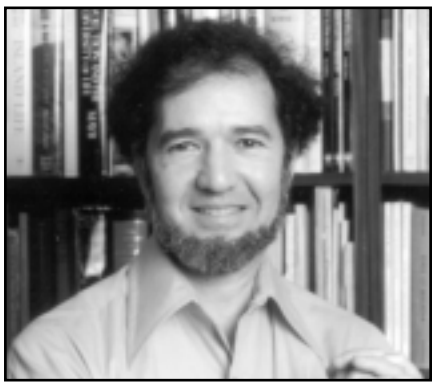
FASEB Salutes John Edward Porter

At the convening dinner of the FASEB Funding Consensus Conference, FASEB President Mary Hendrix presented John Edward Porter, the outgoing chairman of the House Appropriations Subcommittee on Labor, Health and Human Services and Education, with an award of appreciation. Representative Porter was a strong advocate of biomedical research support by the National Institutes of Health. He has said often that he believes that biomedical research holds the promise of cures for deadly diseases and sustains the US biotechnology industry, contributing to a positive balance of trade and creating highly paid, high-tech jobs in the country's economy. "America is the dominant global force in biomedical research," he once said. "The advances that are being realized each day in this area are truly incredible." On December 7, 2000 FASEB named a street on its campus "John Porter Way," to honor his advocacy.

Former FASEB President David Kauffman, former congressman John Porter, and APS Past President Gerald DiBona meet at the FASEB Funding Consensus Conference.

Diamond Awarded Prize for Environmental Achievement

Two high-profile conservation biologists—known for work in the Amazon and New Guinea, respectively—have been awarded this year's prestigious Tyler Prize for Environmental Achievement. Tom Lovejoy of the Smithsonian Institution and the World Bank and APS Member **Jared Diamond**, a Professor of Physiology at the University of California, Los Angeles, were jointly given the $200,000 prize at a April 20 banquet in Beverly Hills, California.



Jared Diamond

Diamond, 63, and Lovejoy, 59, are both scientists and authors, and between them they have largely created the field of conservation biology. Diamond, winner of the 1999 US Medal of Science, has furthered the field of community ecology with bird studies in New Guinea. Lovejoy has put tropical forests on the conservation map with work in the Amazon and inventive initiatives such as "debt-for-nature-swaps" to enable poor countries to convert foreign debt to nature reserves. ❖

John B. West Elected to the American Academy of Arts and Sciences

APS Member John B. West, one of the foremost world authorities on respiratory physiology, has been elected to the American Academy of Arts and Sciences.

West was born in Adelaide, Australia in 1928. After obtaining his medical degree at Adelaide University he moved to London where he spent 15 years mainly at the Royal Postgraduate Medical School, Hammersmith Hospital. He joined the UCSD Medical School in 1969 and participated in teaching the charter class of medical students.

West has performed extensive research, particularly on the pulmonary circulation and gas exchange. He led the team that discovered the effects of gravity on the distribution of pulmonary blood flow. A related interest has been the effects of oxygen deprivation on the body at high altitude. He was a member of Sir Edmund Hillary's Silver Hut expedition to the Himalayas in 1960-1961 when he lived for several months at an altitude of 19,000 feet. In 1981 he led the American Medical Research Expedition to Everest during which the first physiological measurements were made on the summit at 29,028 feet. West's work on the effects of gravity in the lung led him into a study of weightlessness as it affects astronauts in space.

John B. West

Several experiments have been carried out in Spacelab on the Space Shuttle, and the first measurements will be made on the International Space Station later this year.

West has a strong commitment to teaching and his book *Respiratory Physiology—The Essentials* has been translated into 13 languages and is used all over the world. He also has a keen interest in the history of physiology and his book High Life: *A History of High—Altitude Medicine and Physiology* is a standard text. He has spearheaded the development of an archival collection in high-altitude medicine and physiology in the Mandeville Special Collections Library at UCSD. He is on the editorial boards of several scientific journals, and is the editor-in-chief of the new journal *High Altitude Medicine & Biology*. He has served on numerous national committees including those of the National Academy of Sciences, National Institutes of Health and NASA. He has published 20 books and almost 400 articles.

West has received many honors including an honorary doctoral degree from the University of Barcelona, Spain, foreign membership in the Russian Academy of Sciences, a term as president of the American Physiological Society, and the Ernst Jung prize for medicine. A full CV and partial list of publications can be found at http://medicine.ucsd.edu/faculty/jwest/.

The American Academy of Arts and Sciences is based in Cambridge, MA and has 3,700 US and 600 foreign members. This year it elected 10 new members in the section on Medical Sciences and West was the only Californian.

West and his wife Penelope have two children. Robert is a resident in pathology at Stanford, and Joanna works with Time Warner in New York City. ❖

David Millhorn to Head the University of Cincinnati Genome Research Institute

Internationally distinguished biomedical researcher and APS Member David Millhorn, has been selected to head the new University of Cincinnati (UC) Genome Research Institute at the university's recently acquired laboratory complex in Reading, Ohio. Millhorn is chairman of the Department of Molecular and Cellular Physiology at the UC College of Medicine, a position he has held since 1994, when he was recruited from the University of North Carolina.

"We are extremely pleased that David will be the director of the new Genome Research Institute," said John Hutton, MD, dean of the UC College of Medicine. "David is a world renowned scientist himself, and he has built a highly successful department of basic researchers here at UC. Under his leadership, eminent scientists have been recruited, and the department's research grant holdings have doubled in just five

years. David will continue as chairman of the Department of Molecular and Cellular Physiology at UC, and his faculty will be among the first researchers to move to the new institute."

The new genome institute will be located in facilities donated to the university by Aventis Pharmaceuticals. The property consists of 360,000 square feet of laboratories and office space on 23 acres of land.

"I am very excited about the possibilities surrounding the development of the Genome Research Institute as a world-class research facility," Millhorn said. "This is an opportunity for the university to bring together groups of highly qualified investigators to research significantly important areas and develop a biomedical presence in Cincinnati and the Tristate that will be competitive nationally."

The research facility north of the university's main campus will provide research space for groups of scientists from UC and Children's Hospital Medical Center. The initial core of researchers will come from Millhorn's Department of Molecular and Cell Physiology, which is ranked in the top 15-20 percent among academic medical centers nationwide. The department's faculty are funded mainly by grants from the NIH, and their basic research is applicable to understanding, preventing and treating a wide range of diseases including cancer, stroke, heart disease, neurological diseases and nervous system injury, hypertension, cystic fibrosis, osteoporosis, kidney disease and diabetes.

"A major underlying theme of the department's research is to use genetic and molecular information to understand normal and abnormal cell and organ function," Millhorn said. "This will be a primary theme for research at the new Genome Research Institute."

According to Millhorn, researchers at the genome institute will be using information from the Human Genome Project and applying technology such as genomics and proteomics to study complex physiological traits as well as disease processes. Millhorn envisions the institute having focus areas in cancer biology, neuroscience, endocrinology and development, diabetes and cardiovascular/ pulmonary as well as other areas in which new genomic approaches can be utilized to gain a better understanding of disease processes.

David Millhorn

"The types of research I hope to have at the institute are areas of importance for the health of our community as well as the nation," Millhorn said.

As an extension of the university campus, Millhorn expects all types of biotechnology-related researchers within the university to inhabit the premises of the institute. Recruitment efforts are underway to attract leading investigators to the new institute, and Millhorn expects new researchers to be at UC by next spring.

"For the first five years, our mission is to start with a core of investigators already at UC and then add to that by recruiting world-class researchers to the UC institute," Millhorn said. "By the end of the first five years, we hope to have a group of 40-50 principle investigators and their staffs at the institute. That translates into about 250 individuals involved in research programs."

Millhorn is on numerous national and international panels and advisory committees and his research has led to important discoveries concerning genomic and molecular mechanisms that regulate cell survival and function during hypoxia (reduced oxygen). Hypoxia occurs in a number of life-threatening conditions such as stroke and heart attack and it plays a major role in tumor growth. Millhorn's research will help develop new treatment strategies to minimize cell injury and death during these conditions and help prevent tumors.

Millhorn has published over 200 research papers and is currently the principal investigator on six federal research grants which include a MERIT award from the National Heart, Blood and Lung Institute, a Genomics Center grant and a grant from the U.S. Department of Defense.

Millhorn plans to recruit scientists to the Genome Research Institute who develop basic science laboratories that are highly successful in competing for federal funding for research. The plans also include recruiting individuals who might also be interested in commercial outcomes of their research such as the development of new biotechnology companies.

The UC Medical Center is a leader in medical research, education and patient care. The UC College of Medicine, one of the oldest medical schools in the country, is ranked in the top 50 medical schools nationwide by *U.S. News and World Report*. The college ranks in the top 30 nationally in federal research funding.

Having affiliated with Centocor, Inc., Malvern, PA, as Associate Director of Clinical Development, **Sanjay Batra** has moved from Bracco Diagnostics, Inc., Department of Clinical Development, Princeton, NJ.

Recently, **Nicholas J. Bernier** has affiliated with the Department of Zoology, University of Guelph, Guelph, Ontario, Canada. Previously, Bernier was associated with the Department of Biological Science, University of Alberta, Edmonton, Alberta, Canada.

Formerly, **Loren A. Bertocci** was Director of Biochemistry, University of Texas Southwestern Medical Center, Dallas, TX. Currently, Bertocci is Director of Biochemistry, Institute of Exercise and Environmental Medicine, Presbyterian Hospital, Dallas, TX.

Michael William Brands has moved from the Department of Physiology & Biophysics, University of Mississippi Medical Center, Jackson, MI, to the Department of Physiology, Medical College of Georgia, Augusta, GA.

Joining the Department of Internal Medicine, Yale University School of Medicine, New Haven, CT, **Herbert S. Chase** is currently the Deputy Dean of Education and Professor of Medicine. Prior to his new assignment, Chase was with the Department of Medicine, Columbia University College of Physicians and Surgeons, NY.

Mohammed Jasim Uddin Chowdhury has recently joined the Department of Biology, McMaster University, Hamilton, Ontario, Canada. Prior to his new assignment, Chowdhury was associated with the Department of Biology, University of Antwerp, Belgium.

Sidney Cohen has accepted a position with the Division of Gastroenterology, Jefferson Medical College, Philadelphia, PA. Cohen had previously been with the Department of Medicine, Temple University School of Medicine, Philadelphia, PA.

Accepting a position with the Department of Neurology, Duke University Medical Center, Durham, NC, **Carol A. Colton** has moved from the Department of Physiology and Biophysics, Georgetown University Medical School, Washington, DC.

Karrie Elizabeth Comatas has moved from the Department of Microbiology and Cell Science, University of Florida, Gainesville, FL, and has joined the Department of Medicine, Duke University, Durham, NC.

Having joined the Lankenau Institute for Medical Research, Jefferson Health System, Wynnewood, PA, **Robert H. Cox** has moved from the Department of Physiology, University of Pennsylvania, Philadelphia, PA.

Moving to the Department of Pharmacology, University of Alberta, Edmonton, Alberta, Canada, **Edwin E. Daniel** has left the Department of Medicine, McMaster University Health Science Center, Hamilton, Ontario, Canada.

Christophe Depre has accepted an assignment with the Cardiovascular Research Institute, Hackensack University Medical Center, Hackensack, NJ. Prior to his new position, Depre was affiliated with the Cardiovascular Research Institute, University of Medicine & Dentistry of New Jersey, Newark, NJ.

Having affiliated with the Department of Microbiology and Molecular Genetics, Medical College of Wisconsin, Milwaukee, WI, **Michael Barton Dwinell** has moved from the Department of Medicine, University of California at San Diego, La Jolla, CA.

Kenneth H. Ely has affiliated with the Trudeau Institute, Saranac Lake, NY. Prior to his new position, Ely was associated with the Department of Physiology, Dartmouth Medical School, Lebanon, NH.

Jun Feng is now a member of the Daughtry Family Department of Surgery, University of Miami, Miami, FL. Previously, Feng was a member of the Department of Surgery, Children's Hospital of Buffalo, Buffalo, NY.

Recently, **David Robert Grimm** accepted a position with the Department of Medicine, Spinal Cord Research, Mount Sinai School of Medicine, VA Medical Center, Bronx, NY. Grimm was previously affiliated with the Department of Physiopathology, New York Chiropractic College, Seneca Falls, NY.

Recently, **John H. Johnson** has joined the Department of Licensing, Pfizer Global Research Development, Ann Arbor, MI. Prior to his new assignment, Johnson was with the Department of Cell Biology, Parke-Davis Pharmaceutical Research, Ann Arbor, MI.

Joining the Department of Pediatrics, University of Texas Medical Branch, Galveston, TX, **Craig L. Kien** has moved from the Section of Nutrition, Children's Hospital, Columbus, OH.

Accepting a position with the Department of Medicine and Nephrology, University of Utah Health Science Center, Salt Lake City, UT, **Bellamkonda K. Kishore** has moved from the Division of Nephrology & Hypertension, University of Cincinnati School of Medicine, Cincinnati, OH.

Ramon Rogelio Latorre has joined the Department of Molecular Physiology and Biophysics, Center of Scientific Studies of Santiago, Chile. Prior to his new assignment, Latorre was with the Department of Biology, University of Chile Faculty of Science, Santiago, Chile.

Affiliating with the Department of Pharmacology, Merck Frosst Canada and Co., Pointe-Claire Dorval, Quebec, Canada, **Martin G. Latour** has moved from the Department of Pharmacology and Therapeutics, University of Manitoba Faculty of Medicine, Winnipeg, Canada.

Zhicheng Li has recently joined the Department of Neurosurgery, Cleveland Clinical Foundation, Cleveland, OH. Prior to his new position, Li was associated with the Dalton Cardiovascular Center, University of Missouri, Columbia, MO.

Joining the Department of Physiology, Loyola University Chicago Stritch School of Medicine, Maywood, IL, **Lars Siegfried Maier** has moved from the Department of Cardiology, Georg August University, Göettingen, Germany.

Kenneth G. Mandel has recently become the President and CEO of KGM Innovation Associates, Inc., Fairfield, OH. Prior to his new appointment, Mandel was with New Products Research, Smith Kline Beecham Consumer Healthcare, Parsippany, NJ.

Joining the Division of Neonatology, Johns Hopkins University School of Medicine, Baltimore, MD, **Jane E. McGowan** has recently moved from the Department of Neonatology, Medical College of Pennsylvania, Hahnemann University, Philadelphia, PA.

Sheba M.J. Mohankumar has joined the Department of Veterinary Pathology, Michigan State University, East Lansing, MI. Mohankumar was previously associated with the Department of Diagnostic Medicine and Pathobiology, Kansas State University, Manhattan, KS.

Gregory S. Nelson has joined the Faculty of Medicine, Health Science Center, University of Calgary, Alberta, Canada. Prior to his new affiliation, Nelson was with the Department of Cardiology, Johns Hopkins Hospital, Baltimore, MD.

Joining the Department of Physiology and Cell Biology, Ohio State University College of Medicine and Public Health, Columbus, OH, **Muthu Periasamy** has moved from the Department of Cardiology, University of Cincinnati College of Medicine, Cincinnati, OH.

Formerly, **Jeppe Praetorius** was with the Department of Physiology and Pharmacology, University of Southern Denmark, Odense, Denmark. Recently, Praetorius joined the Laboratory of Kidney & Electrolyte Metabolism, National Heart, Lung, and Blood Institute, NIH, Bethesda, MD.

Having accepted a position with the MultiCare Medical Group, Tacoma, WA, **Harrell Lester Reed, II** has moved from the Division of Biochemistry Middlemore Hospital, Auckland, New Zealand.

Recently, **William Brian Reeves** moved from the Division of Nephrology, University of Arkansas Medical Science, Little Rock, AR, to join the Division of Nephrology, Milton S. Hershey Medical Center, Pennsylvania State University College of Medicine, Hershey, PA.

M. Audrey Rudd has joined The Bio Med Bio Tech Research Institute, North Carolina Central University, Durham, NC. Previously, Rudd was with the Department of Medicine, Boston University School of Medicine, Boston, MA.

Joining the Department of Medicine, Albert Einstein College of Medicine, Bronx, NY, **James Scheuer** has moved from the Department of Medicine, Montefiore Medical Center, Bronx, NY.

Olusoga Adekunle Sofola has moved from the Department of Cardiovascular Research, University of Leeds, Leeds, UK, to the Center for Cardiovascular Diseases, Texas Southern University College of Pharmacy and Health Sciences, Houston, TX.

Formerly with the Department of Psychiatry, University of Pittsburgh, Pittsburgh, PA, **John A. Sweeney** has joined the Department of Psychiatry, Neurology, and Psychology, University of Illinois, Chicago, IL.

Moving to the Division of Gastroenterology, University of Michigan, Ann Arbor, MI, **R. Alberto Travagli** has moved from Neurogastroenterology Research, Henry Ford Health Science Center, Detroit, MI.

Gerald van de Werve has joined the Department of Nutrition, University of Montreal, Quebec, Canada. van de Werve was with the Endocrinology Division, Hospital Notre-Dame, Central Hospital University of Montreal, Quebec, Canada.

Accepting a position with the Department of Metabolic Diseases Research, Bayer Corporation, West Haven, CT, **Catherine M. Venturini** has moved from the Cardiovascular Department, Monsanto Co/Searle, St. Louis, MO.

Accepting a position with the Shonan Kamakura General Hospital Heart Center, Kamakura, Japan, **Yoshio Watanabe** has moved from the Chiba Tokushu-kai Hospital, Funabashi, Japan.

Joining the Department of Human Physiology, University of California-Davis School of Medicine, Davis, CA, **Jonathan H. Widdicombe** has moved from the Department of Physiology and Cardiovascular Research Institute, University of California, San Francisco.

People & Places

Robert W. Wiseman has joined the Department of Radiology and Physiology, Michigan State University, East Lansing, MI. Prior to his new appointment, Wiseman was with the Department of Radiology, University of Washington Medical Center, Seattle, WA.

Accepting the position of Chief Scientific Officer with the BioTechPlex Corporaton, Elk Grove Village, IL, **Lid B. Wong** has moved from Lidon Technology, CTP Research Center, Chicago, IL.

Formerly with the Department of Physiology and Biophysics, University of Tennessee, Memphis, TN, **Momoh Audu Yakubu** is presently associated with the Center for Cardiovascular Diseases, College of Pharmacy and Health Sciences, Texas Southern University, Houston, TX.

Announcements

Fulbright Offers Lecturing/Research Awards in 140 Countries

The Fulbright Scholar Program is offering lecturing/research awards in some 140 countries for the 2002-2003 academic year.

Opportunities are available not only for college and university faculty and administrators, but also for professionals from business and government, as well as artists, journalists,scientists, lawyers, independent scholars and many others.

Traditional Fulbright awards are available from two months to an academic year or longer. A new short-term grants program--the Fulbright Senior Specialists Program--offers two-to-six - week grants in a variety of disciplines and fields.

While foreign language skills are needed in some countries, most Fulbright lecturing assignments are in English. Some 80 percent of the awards are for lecturing.

Application deadlines for 2002-2003 awards are:

August 1, 2001 for Fulbright traditional lecturing and research grants worldwide

November 1, 2001 for spring/summer seminars in Germany, Korea and Japan for international educators and academic administrators and for the summer German Studies Seminar

Fulbright Senior Specialists Program: **rolling deadline**

For information, contact the Council for International Exchange of Scholars (CIES) at 3007 Tilden Street, NW, Suite SL, Washington, DC 20008-3009. Telephone: 202-686- 7877; Email: appreguest@cies.iie.org. Information and an online application are also available on the Web at www.cies.org.

The Fulbright Scholar Program is sponsored by the United States Department of State, Bureau of Educational and Cultural Affairs.

27th Annual Topics in Gastroenterology and Liver Disease

This annual postgraduate seminar, sponsored by the Johns Hopkins University School of Medicine, is designed for gastroenterologists, endoscopists, internists, and surgeons interested in the treatment of digestive and liver disease. Areas to be discussed include peptic ulcer therapy, helicobactor pylori, methotrexate use in IBD, other IBD therapies and surgery, laparoscopic cholecystectomy, hepato diliary, pancreatic surgery, liver transplantation, hepatitis C and other chronic liver diseases.

Course Directors: Theodore M. Bayless
John L. Cameron
William J. Ravich

October 3-5, 2001
Pier 5 Hotel, Baltimore, Maryland
Credit: AMA Category I
Fee: Physicians: $560 ($520 if before Aug. 15, 2001)
Residents and Fellows*: $285 ($250 if before Aug. 15, 2001)
Contact Person: Program Coordinator
Johns Hopkins University School of Medicine
Office of Continuing Medical Education
Turner 20/720 Rutland Avenue
Baltimore, MD 21205
Tel: 410-955-2959
Fax: 410-955-0807
Email: cmenet@jhmi.edu
http://www.med.jhu.edu/cme

Announcements

Volvo Awards for Low Back Pain Research

In order to encourage research in low back pain, the Volvo Company for the 24th and final year will sponsor three prizes of $10,000 each. Awards will be made competitively on the basis of scientific merit in one or more of the following three areas: clinical studies, bioengineering studies, or studies in other basic science areas

Papers submitted for the contest must contain **original** material, not previously published or submitted for publication. A multiple authorship is acceptable. The manuscripts, in the English language, should be in the form of a complete report, including original illustrations (marked with names) which is not to exceed 15 typewritten pages; references and tables can be added as double-spaced typed text not be smaller than Times 12 point and in a form suitable for submission as an original paper to a scientific journal. Ethics committee approval is necessary for all animal studies, as well as controlled clinical studies.

One original and five copies of each paper in full, including illustrations, must reach the address given below **not later than December 3, 2001**. Accordingly, articles sent by fax will **not** be accepted. Please include complete author address with telephone number, fax number, and email address. Winners will be informed end of February 2002.

One of the authors should be prepared, at his/her own expense, to attend the meeting of the International Society for the Study of the Lumbar Spine, May 15-19, 2002 in Cleveland, OH, to present the paper and to receive the award.

The board of referees will be chaired by Alf Nachemson and will contain members from the fields of clinical medicine, bioengineering and biochemistry.

All correspondence concerning the award should be directed to: Professor Alf Nachemson, Department of Orthopaedics, Sahlgrenska University Hospital, S-413 45 Göteborg, Sweden. ❖

APS Sustaining Associate Members

The Society gratefully acknowledges the contributions received from Sustaining Members in support of the Society's goals and objectives.

Abbott Laboratories
ADInstruments
American Medical Association
Astra Arcus USA, Inc.
Axon Instruments, Inc.
Berlex Biosciences
Gould, Inc.
The Gatorade Company
The Grass Foundation
Harvard Apparatus
Janssen Research Foundation
Eli Lilly and Company
The Mack Printing Group
Merck and Company, Inc.
Nycomed, Inc.
Pfizer, Inc.
Pharmacia and Upjohn, Inc.
Procter & Gamble Company
Rhone-Poulenc Rorer
W. B. Saunders Company
Schering-Plough Research Institute
G. D. Searle and Company
SmithKline Beecham Pharmaceuticals

Deadlines! Deadlines!

The APS sponsored awards are plentiful, but in order to be considered, don't forget to submit the application information before the deadline!

Award	Next Deadline
William T. Porter Fellowship Award	July 15
Research Career Enhancement Awards	October 15
Teaching Career Enhancement Awards	October 15
Shih-Chun Wang Young Investigator Award	November 1
Arthur C. Guyton Awards in Integrative Physiology	November 1
Giles F. Filley Memorial Awards for Excellence in Respiratory Physiology and Medicine	November 1
Lazaro J. Mandel Young Investigator Award	November 1

MEMBERSHIP APPLICATION FORM

THE AMERICAN PHYSIOLOGICAL SOCIETY

Tphys6.01

Check membership category you are applying for: ❑ Regular ❑ Affiliate ❑ Student

Do you currently hold membership in the APS? ❑ Yes ❑ No

If you answered yes to above, what is your category of Membership?_____Year elected?_____

Name of Applicant: _____/_____/_____
Last Name or Family Name *First Name* *Middle Name*

Date of Birth_____/_____ /_____Optional: Male ❑ Female ❑
Month *Day* *Year*

Institution Name_____Department_____

Institution Street Address_____

_____

City/State/Zip/Country_____

Phone_____Fax_____

E-mail_____

EDUCATIONAL STATUS ***(Important: if you are enrolled as a student, include the degree and pending date of completion)

Dates*	Degree*	Institution	Major Field	Advisor

DOCTORAL DISSERTATION TITLE (if applicable):_____

_____

POSTDOCTORAL RESEARCH TOPIC (if applicable):_____

_____

SPONSORS (Sponsors must be APS Members. If you are unable to find sponsors, mail or fax this form to the address on the back of this form and we will locate them for you.)

Check this box if applicable: ❑ Please locate sponsors on my behalf.

#1 Sponsor Name_____

Mailing Address_____

_____

_____

Phone_____

Fax_____

E-mail_____

Sponsor Signature*_____

#2 Sponsor Name_____

Mailing Address_____

_____

_____

Phone_____

Fax_____

E-mail_____

Sponsor Signature*_____

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

▶ **Please turn over for 2 more questions...and mailing instructions.**

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

OCCUPATIONAL HISTORY [Check if student ❒]

Current Position:

Dates	Title	Institution	Department	Supervisor

Prior Positions:

Dates	Title	Institution	Department	Supervisor

LIST YOUR PUBLICATIONS FROM THE PAST 5 YEARS (List them in the same style as sample below).

Sample: Cheung, Stephen S., and Tom M. McLellan. Heat acclimation, aerobic fitness, and hydration effects on tolerance during uncompensable heat stress. J. Appl. Physiol. 84(5): 1731-1739, 1998.

IMPORTANT INFORMATION:

Do not include a curriculum vitae or reprints.

Mail your application to: Membership Services Department, The American Physiological Society
9650 Rockville Pike, Bethesda, Maryland 20814-3991 (U.S.A.)

Send no money now: You will receive a dues statement upon approval of membership.

Approval Deadlines: Regular membership applications are considered for approval by the Council three times per year. Student and Affiliate membership applications are accepted monthly upon approval of the Executive Director of the Society.

Questions? Call: 301-530-7171 ▪ Fax: 301-571-8313 ▪ E-mail: members@aps.faseb.org ▪ Web: www.the-aps.org

June 13-16

NephroAsia 2001: Conquering Current Challenges in Nephrology (International Meeting of National Kidney Foundation of Singapore, American Society of Nephrology, and American Nephrology Nurses' Association), Singapore. *Information:* National Kidney Foundation of Singapore. Tel: +65-299-0200; fax: +65-299-3164; email: nephroasia@nkfs.org; Internet: http://www.nephroasia.com.

June 17-22

Beyond Genome 2001. Includes 10th Annual Bioinformatics and Genome Research (June 17-19), 3rd Annual In Silico Biology: Modeling Systems Biology for Drug Development (June 19-20), and 5th Annual Proteomics: From Proteins to Drugs (June 21-22), San Francisco, CA. *Information:* Cambridge Healthtech Institute, 1032 Chestnut Street, Newton Upper Falls, MA 02464. Tel: 617-630-1300 or 888-999-6288; fax: 617-630-1325; Internet: http://www.beyondgenome.com.

June 20-23

Endocrine Society's 83rd Annual Meeting, Denver, CO. *Information:* Endocrine Society, 4350 East West Highway, Suite 500, Bethesda, MD, 20814-4426. Internet: http://www.endo-society.org/scimtgs.

June 23-27

Control of Posture and Gait (Symposium of the International Society of Postural and Gait Research), Maastricht, The Netherlands. *Information:* Organizing Secretariat, Conference Agency Limburg, PO Box 1402, 6201 BK Maastricht, The Netherlands. Tel: +31-043-361-9192; fax: +31-043-361-9020; email: cal.conferenceagency@wxs.nl; Internet: http://www.mbfys.kun.nl/ispg2001/.

July 4-8

7th International Symposium on Resistance Arteries (7ISRA), Muskoka Sands Resort, north of Toronto, Canada. *Information:* Ernesto L. Schiffrin or Robert M.K.W. Lee, 7th International Symposium on Resistance Arteries, Department of Anaesthesia (HSC-2U3), McMaster University, Hamilton, Ontario, Canada L8N 3Z5. Tel.: 905-521-2100 ext. 75170; fax: 905-523-1224; email: 7isra@fhs.mcmaster.ca; Internet: http://www.fhs.mcmaster.ca/7isra.

July 19-22

9th Annual Advanced Topics in CT Scanning: The 2001 Edition, Lake Tahoe, NV. *Information:* Conference Coordinator, Office of Continuing Medical Education, Johns Hopkins University School of Medicine, Turner 20, 720 Rutland Avenue, Baltimore, MD 21205. Tel: 410-955-2959; fax: 410-955-0807; email: cmenet@jhmi.edu; Internet: http://www.med.jhu.edu/cme.

July 21-24

Fifth Biennial Meeting of the International Association of Medical Science Educators, Rochester, Minnesota U.S.A. *Information:* Roger W. Koment, Ph.D., President, IAMSE Administrative Office, 5535 Belfast Place, Suite A, Springfield, VA 22151 USA.; Tel: 703-333-5223, fax: 703-333-5224, email: rkoment@iamse.org, Internet: http://www.iamse.org/conf5_menu.htm

August 19-22

7th World Congress for Microcirculation, Sydney, Australia. *Information:* Internet: http://www.ozemail.com.au/~worldcongress.

August 26-30

Fifth International Symposium on Mass Spectrometry in the Health and Life Sciences: Molecular & Cellular Proteomics, San Francisco, CA. *Information:* Marilyn F Schwartz, Conference Coordinator, Dept. of Pharmaceutical Chemistry, University of California, San Francisco, CA 94143-0046. Tel: 415-476-4893; email: sfms@itsa.ucsf.edu.

August 26-September 1

XXXIV International Congress of Physiological Sciences, Christchurch, New Zealand. *Information:* Congress Secretariat, The Conference Company, PO Box 90-040, Auckland, New Zealand. Tel: +64-9-360-1240; fax: +64-9-260-1242; email: info@tcc.co.nz; Internet: http://www.iups2001.org.nz

September 2-5

Cell & Molecular Biology of Membrane Transport Systems and Disorders, Greenmount Beach Resort, Coolangatta, Gold Coast, Queensland, Australia (an Official Satellite Meeting of the International Union of Physiological Sciences Congress 2001). *Information:* For Abstract Submission and further Conference information, please visit the Conference Website: http://www.uq.edu.au/~uqdmarko.

September 2-6

2001 Thermal Physiology Symposium (Sponsored by IUPS Commission of Thermal Physiology), Wollongong, Australia. *Information:* Internet: http://www.uow.edu.au/health/thermal2001