

FASEB NEWS

— Quality Life Through Research —

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Federation's new President Announces Science Policy Agenda for 2000-2001

On July 12, incoming FASEB president Mary J. C. Hendrix met with members of the press in Washington, D.C., to talk about the priorities for her term. "FASEB's most important, overarching goal is to influence policy development in areas that will directly advance biomedical and life science research while addressing public health needs and promoting quality life through research — FASEB's motto," said Dr. Hendrix, professor and head of the Department of Anatomy and Cell Biology at The University of Iowa College of Medicine and the deputy director of the Cancer Center. "To facilitate this goal, my agenda for 2000-2001 is broken down in the following four categories: legislative, policy development, coalition building and communications and outreach."



Mary J.C. Hendrix

Topping Dr. Hendrix's 2000-2001 agenda is the goal to continue to promote the five-year doubling of the National Institutes of Health's (NIH) budget. "The Senate has approved the \$2.7-billion increase for FY 2001 necessary to achieve this doubling goal; however, the House of Representatives included only \$1-billion in its version of the bill," Dr. Hendrix said. "We sense there is growing support for the continuation of this doubling goal, and we are counting on Congressional Champions to attain this."

Her legislative goals also include working to actively expand funding for all fields of science and promoting legislation to increase the support and training of physician scientists. "My involvement in the physician-scientists issue is the continuation of the wonderful work of my predecessor, David Kaufman," she said. "Since the publication of the Physician-Scientists report in February, FASEB has convened a special subcommittee of the Board to examine the issue of debt relief for physician-scientists. That subcommittee developed a proposal for an extramural loan repayment program for physician-scientists, and I have asked Dr. Kaufman to continue his efforts in finding congressional backing for the plan."

See *Hendrix Goals* on Page 6

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FASEB Calls for Substantial Increase in NIH Support for Instrumentation and Equipment

The level of support provided by the National Institutes of Health (NIH) for equipment and instrumentation is insufficient, according to a survey of NIH supported investigators conducted by the Federation of American Societies for Experimental Biology (FASEB). The resulting report recommends that the NIH should, among other things, increase its support for equipment and instrumentation.

FASEB's Science Policy Committee (SPC) undertook the assessment in October 1999 because of the lack of current information from scientists on the status of laboratory equipment and instrumentation. The survey randomly polled 1,000 investigators who had received R01 grants. The respondents generally reflected the NIH grantee population in regards to experience, institutional affiliation and laboratory budget.



David W. Speicher

"We found very quickly that the information on investigator's instrumentation needs was outdated, and that the opinions and needs of the bench scientists were not being met," said

David W. Speicher, who chaired the SPC subcommittee that conducted the study titled, *Research Equipment and Resource Requirements of NIH-Supported Investigators: An Assessment of Current Conditions and Recommendations for Future Funding and Program.*

See *Instrumentation Survey* on Page 7.

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

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The FASEB Journal Launches FJ Express, a new Method of Publishing

FASEB's Office of Publications has launched *FJ Express*, an online publication process that will allow scientists to bypass the sometimes lengthy publication method associated with *The FASEB Journal* and quickly publish scientific papers on the internet. The *FJ Express* route is not a salvage pathway; papers published this way must still undergo the same rigorous peer review and editing process.

The development of *FJ Express* grew, in part, from a growing backlog in papers submitted to the *Journal*. The number of submissions to the *Journal* has increased significantly in recent years.

"Although each submission is reviewed critically – our acceptance rate is less than 25 percent – we have many more accepted manuscripts than we can accommodate," said Vincent T. Marchesi, the editor of the *Journal*. "This has caused our publication time, from date of acceptance to publication, to become undesirably long."

Working with Stanford University's HighWire Press, which publishes the online version of the *Journal*, Dr. Marchesi and the FASEB publications office came up with the idea for *FJ Express*. Within one month of acceptance, peer-reviewed, edited articles will appear online in *FJ Express* in full text as the version of record for citation.

Six manuscripts appeared in the debut edition of *FJ Express*, which was launched July 24. In August, six manu-

scripts will be published via *FJ Express*, and their summaries will appear in the October edition of the *Journal*. Nancy J. Rodnan, the director of the FASEB publications office, expects to eliminate the existing backlog of manuscripts accepted by the *Journal* by March 2001.

"It is perhaps fortuitous that a feasible solution to this problem should arise just when we need it most," said Dr. Marchesi, a professor of pathology and cell biology and director of the Boyer Center for Molecular Medicine at Yale University School of Medicine. "Electronic publication is surely the most effective and cost effective way to publish lengthy scientific articles, and, when coupled with the most advanced technology, is also the most rapid way to disseminate information worldwide."

FJ Express is patterned after the rapid publication format introduced by the *Journal of Biological Chemistry* in 1995. That journal, published by the American Society for Biochemistry and Molecular Biology, is said to have begun the revolution of online scientific publishing.

"The most attractive feature of this new mode of publication is the short interval between date of acceptance and its appearance on-line, which we hope will be less than one month," Dr. Marchesi said. "Under ideal circumstances we should eventually be able to publish material that is fully peer reviewed within two months, or less, from the time of submission."

Although the value of existing online versions of the most popular print journals is unquestioned, there is still some understandable reluctance of many authors to publish their work exclusively on-line, without a print counterpart, Dr. Marchesi said. "To satisfy this deep-seated need to have something in hand, a printed three page summary statement will accompany each *FJ Express* full-text on-line article," he said. "These summaries, prepared by the authors, highlight the most important features of the full length article, and unlike conventional abstracts, offer a limited amount of experimental data that is supplemented by a schematic diagram. It is likely that most readers will find it more convenient to scan these summaries before reading the full length article." In addition, he said, the committees that review papers for grants and promotions should find these summaries at least as useful as conventional reprints.

Ms. Rodnan said that this option of publishing "will soon be the one preferred for hot papers."

"I think it is important to emphasize that we will continue to work to improve the online versions of our published articles as the technology changes," she said. "Enhancements can always be made."

Published *FJ Express* manuscripts, along with instructions for authors, are available online at www.fasebj.org/express/. **FN**

Federation of American Societies for Experimental Biology

Mary J. C. Hendrix, Ph.D., President
University of Iowa

Sidney H. Golub, Ph.D., Executive Director
Howard H. Garrison, Public Affairs Director
Paulette W. Campbell, Editor, *FASEB News*

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Chairman C. W. Bill Young: A Champion of Biomedical Research

This is the first in a series of articles about federal lawmakers who, by their activities on behalf of biomedical research, have enhanced the ability of biomedical and life scientists to improve, through their research, the health, well-being and productivity of all people.

Republican Representative C.W. Bill Young is the dean of the Florida Congressional delegation and Chairman of the House Appropriations Committee, which has jurisdiction over all



C. W. Bill Young

federal discretionary spending. His committee handles approximately one-third of the \$1.7 trillion federal budget. In this role, the “big chairman” – as he is known on Capitol Hill – oversees the work of all 13 House appropriations subcommittees that draft the annual budget for thousands of federal programs, including those at the National Institutes of Health (NIH), the National Science Foundation and other agencies that support and conduct biomedical research.

“With my Appropriations Committee work, I have had the great opportunity to see the direct connection between the funds we appropriate for biomedical research and the difference it can make in the lives of our people,” Mr. Young said. “Because of this, even after becoming chairman of the committee, I have chosen to keep one of my longtime leadership assignments – serving as Vice Chairman of the Labor, Health and Human Services and Education (L/HHS) Appropriations Subcommittee, along side Congressman John Porter.”

The L/HHS subcommittee covers many priorities and “one of the most important is biomedical research conducted at the National Institutes of Health,” Mr. Young said. “I am proud of the fact that in the past five years since Republicans became the majority in Congress, our subcommittee has provided a total of \$72 billion to the NIH for its research programs. In fact, in each of those five years, our Appropriations Committee has provided substantially more research funding for NIH than the President requested in his budget – for a total of \$4 billion more to be exact. And for each of the past two years, we have provided 15 percent increases for the NIH budget, and we are well on our way for the third installment. We are counting on this investment to pay real dividends in the years to come – dividends in the form of new scientific knowledge, new treatments, new diagnostic tools, and new ways to prevent disease before it strikes.”

Mr. Young has been a stalwart supporter of the leadership at the NIH, biomedical science and the effort to double the NIH budget over five years. The L/HHS appropriations bill for fiscal year 2000 reflected his priorities. The bill included strong support for a wide range of research and health programs. For the second year in a row, the bill delivered a dramatic increase for biomedical research, increasing the budget of the National Institutes of Health by 15 percent to \$17.8 billion.

“Our biomedical enterprise, conducted through the NIH, is both a tremendous national treasure and an increasingly critical factor in the national economy – spurring innovation, discovery and the development of biotechnology,” Mr. Young said. “After decades of investment in biomedical research at NIH, we have almost unparalleled promise of greater abilities to prevent,

diagnose and treat many diseases. For example, Congress has invested over \$2.5 billion in the Human Genome Project and I am fully confident that the American people will soon begin to experience the payoff in improved human health. As a result, the health of our children in the future will undoubtedly improve as advances are made through basic research and clinical science.”

Over the years, Mr. Young, and his wife Beverly, have been tenacious in advocating for biomedical research and public health programs – especially for children, the elderly and others who are most vulnerable. They have fought for federal funding to expand biomedical research and to fund the effort to eradicate polio worldwide, train emergency medical personnel to meet the special needs of children and increase the immunization rate for preschoolers. The Youngs have been particularly interested in efforts to ensure that more clinical trials are conducted on pharmaceutical drugs given to children and strong supporters of establishing a solid science base for dosage recommendations for children. They also established the National Marrow Donor Program, the international registry now in its 15th year.

Mr. Young has taken action to enhance research efforts in many areas, including cancer, neuroscience, Parkinson’s Disease, AIDS, oral health research, Alzheimer’s Disease, asthma, diabetes, arthritis, vision loss and blindness, lupus, Chromosome 18, muscular dystrophy, heart disease and stroke, polycystic kidney disease, organ transplantation, maternal and child health, substance abuse and mental health, lupus, alternative medicine and environmental health. He is a champion of maintaining a strong public health infrastructure through the CDC and its public health programs. Additionally, he has initiated new medical research efforts for breast cancer, prostate cancer, neurofibromatosis, and other areas through the Department of Defense appropriations process, providing more than \$1.2 billion in new funding for peer-reviewed scientific studies.

Fifteen years ago, Mr. Young and his wife Beverly started the National Marrow Donor Program. They learned of the need for a registry while caring for a friend’s 10-year-old daughter while she battled leukemia at All Children’s Hospital in St. Petersburg, Fla. The child did not have the benefit of marrow transplantation, which was experimental at the time. After the girl’s death, the Youngs immediately began working toward their vision of the National Marrow Donor Program that exists today. Mr. Young initiated the effort in early 1986 with \$2 million appropriated to the U.S. Navy’s marrow transplantation research program. By December of that year, the first milestone was reached when the first transplant was completed with a donor from the national registry. Since starting the registry, Mr. Young has developed a model donor recruitment project in his congressional district. The response was overwhelming with individuals and corporations alike volunteering to join in the mission. Today, almost 4 million volunteers participate in the registry, ready to donate their bone marrow to save a life anywhere in the world. Since its inception, more than 10,000 transplants have been achieved through the registry. Children and adults with leukemia or any one of more than 60 fatal blood disorders receive a second chance through a bone marrow transplant from an unrelated donor, a stranger willing to give the living gift of life.

“Given Chairman Young’s long-standing support for the research enterprise, the public has and will continue to benefit tremendously from his commitment to public health needs,” said FASEB President Mary J. C. Hendrix. **FN**

Science Policy Committee Update

On July 1, Sue P. Duckles took over the helm of FASEB's Science Policy Committee (SPC), and several new members joined the committee in place of scientists whose terms of service had expired. This group is preparing for its annual Face-to-Face meeting in September, during which they will examine issues of concern to biomedical scientists and develop long-term goals and an action agenda for the coming year. The committee's priorities for 2000-2001 will be detailed in the October *FASEB News*. The changeover in leadership of the SPC provides a timely opportunity to review the recent accomplishments of the group. Over the past year, the committee has:

- Released two major reports, one on the career challenges facing physician scientists and another on the instrumentation and equipment needs of investigators supported by the National Institutes of Health
- Completed a *Breakthroughs in Bioscience* article titled: "Magnetic Resonance Imaging: From Atomic Physics to Visualization, Understanding and Treatment of Brain Disorders."
- Held a workshop on Pain and Distress in Lab Animals
- Proposed a debt-relief program for physician-scientists
- Launched the Science Policy and Public Affairs (SPPA) Alert, a monthly electronic newsletter containing information about legislative developments, research-agency actions and reports of concern to researchers
- Established a subcommittee on human subjects protections, and began reviewing the policy development needs in this area.

Outgoing SPC Chair reflects on his Term



David L. Brautigam is the director, Center for Cell Signaling and professor of Microbiology and Medicine at the University of Virginia and the board representative from the American Society for Biochemistry and Molecular Biology. He stepped down as SPC chairman on June 30. Below he reflects on his term:

The SPC was created in 1998 to serve as FASEB's "think tank," developing long-term, proactive policy statements in support of biomedical science and advising the Public Affairs Executive Committee on these concerns. David G. Kaufman – who was then FASEB's president-elect – was the founding chairman of SPC, and he organized the group into subcommittees. His work was of substantial benefit to me when I assumed the chairmanship in July 1999.

Last year's SPC Face-to-Face meeting was an important event, because the rest of the year we talked to disembodied voices in teleconferences once a month or more. (Just as an aside, a telephone headset would be an extremely useful purchase for committee members given the amount of time spent on the phone.) The keynote speaker for that meeting was Claude E. Barfield, the director of Science and Technology Policy at the American Enterprise Institute. His advice: anticipate issues, incorporate divergent views and focus efforts to accomplish specific tasks. We have followed those suggestions pretty well.

FASEB Executive Director Sidney H. Golub, urged the group to be prospective rather than reactive and to identify areas for FASEB action. That was and is easier said than done, but we have anticipated as well as reacted to issues this year.

All members of FASEB societies should appreciate that their interests are being considered, debated and advocated by a group of volunteers who devoted precious hours of their time to be involved in the SPC. These scientists bring expertise and well-considered (and often divergent) opinions to the monthly teleconferences and additional sub-committee calls. It has been a pleasure to work with them, because they are passionate about the issues, but also readily willing to cooperate and find ways to reach consensus. There is a clear sense of working as a team for the common good of the scientific community.

Being volunteers for FASEB, while also carrying out our other at-home responsibilities, is made much more effective, even possible, by the outstanding professional staff support in Bethesda, Md. Meetings are scheduled, information collected, agenda packets assembled and distributed and minutes prepared with awesome efficiency. These administrative functions are combined with astute observations, background information and political perspectives from a crack team of policy staff assembled and directed by Howard G. Garrison, Director of Office of Public Affairs (OPA). Tamara Zemlo, the senior science policy analyst in OPA, has directed several of the most successful SPC projects, coordinating the committee's activities and providing analytic expertise. Business is conducted with good humor, personal respect and confidentiality. We would all like our home departments to work so well!

With such support available, you might want to get involved. We need people with knowledge and energy to advocate for working scientists, not just to Congress about appropriations, but also to federal agencies who make rules that govern our research. It is this latter function that is under-appreciated by most investigators, but critical to reducing bureaucratic burdens handicapping our research activities.

What is the SPC?

The SPC is made up of five standing subcommittees. Below is a brief description of each committee's charge:

Animals and Research

- Studies the issues related to the care and use of animals in biomedical research
- Monitors Federal governmental agencies regulating animal research and nongovernmental organizations involved in accrediting animal research programs
- Prepares policy statements and reports on the various aspects of animal research such as defining pain and distress, animal facilities costs, and modifications to the Animal Welfare Act

Breakthroughs in Bioscience

- Develops a series of public information articles describing new developments in biomedical research and their benefits to society, which are distributed to members of Congress and their staff, educators, educational organizations, textbook publishers, journalists and policy analysts in think tanks and other organizations.

See SPC on Next Page

Instrumentation and Infrastructure

- Researches the instrumentation and infrastructure needs of biomedical scientists
- Monitors legislation related to instrumentation and infrastructure funding
- Develops position statements on the different instrumentation programs supported by the Federal government

Career Opportunities

- Reviews the status of graduate and postgraduate training in biomedical science by examining the various factors that influence it (funding agency, institutions, mentors and students) and makes recommendations about improving the quality of training
- Studies the scientific career opportunities available to young scientists and makes recommendations to ensure that young scientists are prepared to meet the demands of their new positions and receive the support and guidance necessary to succeed
- Develops reports on the interrelated issues regarding the education and employment of scientists.

Human Subjects: IRBs and Oversight

- Tracks Federal legislation pertaining to the protection of human subjects in biomedical research.
- Monitors Federal regulations regarding the oversight of human subjects research
- Actively interacts with other research organizations to

develop recommendations for improving the efficiency of the IRB review system while maintaining the highest level of protection for human subjects

- Develops policy positions on the different aspects of human subjects protection.

FASEB Publishes Article on MRI

Newer, faster versions of a technology known as magnetic resonance imaging are making it possible to understand, for the first time, exactly how the brain functions. The development of this technology is described in "MRI: From Atomic Physics to Visualization, Understanding and Treatment of Brain Disorders," the latest article to be published in the Breakthroughs in Bioscience series.

The Breakthrough series is a collection of illustrated articles that explain recent developments in basic biomedical research and how they are important to society.

The MRI article, written by science writer David Holzman, talks about the research that led to the development of MRIs and explains how the technology works. The article also describes Functional MRIs, a new type of MRI that helps researchers and doctors see what parts of the brain are active during a specific task and may help scientists understand how the brain learns. This understanding may one day result in better teaching methods and a more productive work environment.

To obtain copies of the MRI article, write to the FASEB Office of Public Affairs, 9650 Rockville Pike, Bethesda, Md. 20814-3998 or call 301-571-0657. Past articles in the series are available online at www.faseb.org/opar/break/.

Under the area of policy development, Dr. Hendrix will direct the NIH subcommittee of the FASEB Funding Consensus Conference to develop a strategic position on the status of the global research enterprise during the NIH doubling years and beyond. "As you are probably aware, Acting NIH Director Ruth Kirschstein has been challenged by Congress to justify the increased support for NIH with respect to tangible outcomes," Dr. Hendrix said. "FASEB will be focused on this issue during the upcoming year as we project scientists' future needs during the Human Genome Era and the 21st Century." She will also discuss this issue with the presidents of FASEB societies during a meeting this fall.

Under Dr. Hendrix's tenure, FASEB will develop new positions on human research subject protections, conflict of interest, intellectual property and other emerging policy issues. "There are real issues regarding the performance of human subjects research and animal research, in defining conflicts of interest, and in navigating the murky waters of intellectual property," Dr. Hendrix said. "Until these issues are resolved to everyone's satisfaction, scientific discoveries may be compromised; partnerships between academia, industry and the government will be strained; and patient advocacy groups will become more anxious as we scientists become more distracted in our efforts to advance scientific discovery to meet public health needs.

"The scientific community has received a request from Secretary of the Department of Health and Human Services Donna E. Shalala to address these multifaceted issues," Dr. Hendrix continued. "And we are actively partnering with the Association of American Medical Colleges and the Association of American Universities in discussions that are self-reflective of our professional practices and procedures in order to comply with new demands from the government that will ensure the protection of individuals involved in human research." Dr. Hendrix has asked Robert E. Rich, FASEB's President-Elect, to represent the Federation in discussions related to human subjects research issues.

To publicly address these issues, FASEB will host in the spring an awareness conference on the challenges of addressing conflict of interest and intellectual property issues. This conference will include representatives from academia, the government, industry and patient advocacy groups.

In the coming months, Dr. Hendrix wants to strengthen FASEB's relationship with NIH institute directors, academic partners and industry scientists "to achieve a global view of scientists' needs in the 21st Century – with respect to education and training, instrumentation and equipment and collaborative funding opportunities," she said. In that vein, she wants to extend FASEB's relationship with federal agencies that support extramural research to include the Department of Defense (DoD). "DoD has been investing in biomedical research over the past four years, and FASEB needs to find ways to increase our influence with this agency," she said.

"We should also expand our working relationships with other bioscience societies – both national and

international – to address issues of common interest, including global issues such as the AIDS epidemic, genetically modified foods and artificially supplemented livestock."

Under "communications and outreach," Dr. Hendrix hopes to, among other things, expand educational and learning opportunities regarding scientific discoveries through FASEB's Breakthroughs in Bioscience series. Since the early 1990s, FASEB's Office of Public Affairs has produced eight articles under this series on topics ranging from cloning to protein folding. A Breakthroughs article on magnetic resonance imaging is scheduled to be released at the end of August. "This series is a wonderful vehicle to communicate our findings to the public, convey our enthusiasm for our work and acknowledge public support for our efforts," she said.

Finally, Dr. Hendrix will focus on the governance of FASEB. "In recent years, the growth in FASEB has been phenomenal," she said. "As we grow and admit more societies, we need to reassess our infrastructure and governance." **FN**

PRINCIPLES AND PRACTICE OF TRACER METHODOLOGY IN METABOLISM

Robert R. Wolfe, Ph.D.

University of Texas Medical Branch
Galveston, Texas

September 10-15, 2000

A combination of didactic and interactive sessions will address both theoretical and practical aspects of tracer methodology in metabolism. The course will open with a general overview of the characteristics of isotopic tracers and the terminology of kinetic analysis. The techniques and equipment used in various types of tracer studies will then be covered. Emphasis will be on the application of stable isotopic tracers in metabolic studies, but principles of use of radioactive tracers will also be covered. Many specific examples of application of tracers to metabolic systems (i.e., carbohydrate, fat, protein, energy) will be discussed in detail. Also included will be discussion of the many aspects of metabolic regulation. Interactive workshops will explore specific problem solving.

Accommodations/Location:

The VICTORIAN Condo Hotel & Conference Center
6300 Seawall Blvd, Galveston, TX

Information:

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Instrumentation Survey, from Page 1

“We also found that we could not assess where equipment needs were, whether the greatest need was shared instrumentation, high-end, specialized instrumentation, or whether the real big needs, the most pressing needs, were routine instrumentation.”

An overwhelming majority of the respondents to the survey indicated that shared equipment and facilities are essential to their research, and 90 percent said they received more than half of their laboratory direct cost budget from the NIH. Yet nearly half of the respondents said that the NIH’s current level of support and management of the Shared Instrumentation Grant (SIG) program was inadequate. [The SIG program is designed to aid researchers in acquiring scarce and prohibitively expensive technology (costing between \$100,000 and \$500,000). The program has been operating since the 1980s, but without Congressional authorization and at radically varying funding levels.]

In addition, more than 50 percent of the respondents said that the NIH’s support for equipment valued at less than \$100,000 – for multiple users and for use in individual laboratories – was also insufficient.

A majority of the respondents – 64 percent – said they believed that increased funding for equipment should be one of the top priorities in an expanding federal research budget. Special attention should be given to supporting new “specialized” equipment in individual laboratories and to establishing new shared-resource facilities in emerging technologies for use by multiple investigators.

The FASEB survey of NIH RO1 recipients and this resulting report represent the first systematic assessment of scientific instrumentation needs and major related issues from the perspective of practicing scientists, according to Dr. Speicher, who represents the Association of Biomolecular Resource Facilities on the SPC. It indicates a substantial, unmet need for both major and minor instrumentation, and this unmet need significantly impedes scientific progress. In addition to the lack of adequate funding is the related issue that new and emerging technologies are not implemented at most institutions in a timely fashion.

Accordingly, FASEB recommends that NIH:

- Increase its level of support for shared equipment costing \$100,000 or more to \$150 million per year for FY2001 with appropriate incremental increases thereafter
- Increase its level of support within the context of existing grant mechanisms such as R01s and P01s for equipment costing less than \$100,000 to \$50 million per year for FY2001.

FASEB also proposes that an expanded SIG program be improved by:

- Decreasing the time from receipt of application to award from the current approximately one year to six months
- Increasing the number of review cycles from one to three per year
- Raising the caps to at least \$1 million to authorize the purchase of more expensive equipment and to compensate for inflation pressures
- Allowing applicants to bundle two or more unrelated pieces of equipment that together cost more than \$100,000
- Providing support for a maintenance agreement for up to three years if included in the instrument purchase price

- Permitting the establishment of facilities using components rather than strictly commercial instruments
- Using standing rather than *ad hoc* study sections for reviewing SIG grant proposals so that consistency in the review process is maintained
- Selecting peer reviewers with adequate expertise in emerging technologies.

In the coming months, FASEB plans to work with NIH and Congress to substantially increase funding for all equipment categories to adequate levels in concert with changes in the granting mechanism. The report is available by calling the FASEB Office of Public Affairs at 301-571-0657 or on the Web at www.faseb.org/opar/instrument/report.html.

For additional programmatic or scientific information in regards to the NIH SIG Program, contact Marjorie A. Tingle, Ph.D., Shared Instrumentation Grant Program, National Center for Research Resources, 6705 Rockledge Drive, Room 6148, MSC 7965, Bethesda, MD, 20892-7965. Dr. Tingle's telephone number is 301-435-0772; fax is 301-480-3659; and email address is SIG@ncrr.nih.gov. **FN**

Data from NIH: Modular Grants

Many FASEB Society members are concerned that the new Modular Grant application process at the National Institutes of Health (NIH) reduces the oversight by the scientific reviewers. In an interview with the *FASEB News*, Wendy Baldwin, the Deputy Director for Extramural Research, and Ronald G. Geller, the Director, Office of Extramural Programs, provided some answers and responses to these concerns.

Q: What are the responsibilities of reviewers in determining the budget and duration of awards?

A: The budget recommendation should be based upon the appropriateness of direct costs for the proposed research for each year of support requested. Attention should be given to the need for all personnel listed in the application and their percent effort and role in relation to the recommended research aims. Reviewers should keep in mind the applicant's ability to re-budget amongst budget categories; therefore, the appropriateness of the total budget and the requested duration of support in relation to the research proposed should be emphasized. The modular process hasn't changed this. It is still the study section's responsibility to assess the requested budget in the context of the recommended science and the scope of the project. And if reviewers feel that the applicant has asked for too much, they are asked, encouraged, to recommend lower amounts.

Q: Should reviewers no longer consider the appropriateness of the proposed budget? Will there be other parts of the application that reviewers will be asked to ignore and leave for NIH to control?

A: No. In fact, we have made it clear to reviewers that this is one of their responsibilities. The difference is that we are giving them different instructions as to what they should be doing. We believe that reviewers have the expertise to make recommendations. That's exactly the issue. But we are saying don't do it by questioning whether the principle investigator needs \$1,200 for travel or \$21,000 for supplies. Tell us whether the overall scope of the science can be done for the kinds of dollars being requested, with the understanding that most of that money is going to be used for personnel.

We are making one adjustment. The budget narrative page has asked the applicants to list only the key personnel: the principle investigator, the co-principle investigator, other senior personnel, but not graduate students and post docs. That has caused a little bit of confusion because the definition of key personnel seems to vary. So we are changing our budget narrative format and asking the applicant to describe all personnel, everybody associated with the project, including consultants, and state their time and effort, roles and responsibilities. Since this is representing 65 to 70 percent of the budget, this information should provide reviewers with more information to make budget recommendations.

Q: How can reviewers justify budget reductions without detailed budgets?

A: We give reviewers historical information on what a typical grant award might include. The pattern hasn't changed in 30 years or so. These kinds of grants are personnel driven, with 65 to 70 percent either requested or awarded in the personnel category, no matter which personnel were there. We think reviewers can make an assessment based on that kind of historical information as well as their own experience and knowledge of special research needs rather than on specific dollars.

Q: Many scientists are required to submit the modular budget to the NIH and develop a detailed budget for their institutions. This has increased the workload and limited their ability to justify the budgets. Who saves time and effort?

A: Institutions are still requiring a detailed budget because they've always done it that way. The bottom line is that they have to begin to change their accounting systems. They are going to have to reexamine their own pre-application and post-award management. Once they do, they will find it easier to deal with some aspects of the modular grant process. Some have already begun to factor the modular application process into how they do business. But it's going to take some time. This is only the first year of all of this, and we are looking at a much more long-term change in what this process is eventually going to be.

Q: Some people have heard that most of the modular grant applications are asking for the maximum number of modules and the maximum duration. Reviewers have little to work with in judging the appropriateness of the number of \$25,000 modules or total dollars based on the sparse information included in these proposals, and consequently, there has been a tendency to not cut the proposed budgets. How can modular budgets not cost more since everyone must round up to the next module?

A: For the first receipt date for modular grant applications, only 15 percent of the R01 applicants asked for the maximum number of modules. So that's certainly not "most everyone." The most commonly requested modules were \$175,000 and \$200,000; each of those was submitted in equal numbers – 20 percent of the total R01s submitted. Now, comparatively, in the prior fiscal year, the average R01 grant was about \$200,000 in direct costs.

Q: The logic of modular grants may have been good when 90 percent of applications weren't funded. Now we hope that 25-to-30 percent (or more) of the applications are supported. The funds will be better spent if scientists make the judgments about the match between what is proposed scientifically and the budget that is justified by the applicant.

A: The overall NIH success rate has been around 25 per cent for a long time. If we are funding only 25 to 30 percent of the applications that are submitted, then why should the remainder of these folks have to provide all this budget detail? That's where we get into "streamlining," whereby, reviewers are asked to categorize applications as either in the upper half or lower half in quality. Applications in the upper half are given full discussion at the study section meeting and receive a priority score, and are routinely taken to advisory council for second-level review. All other applications are not discussed nor scored at the study section meetings. This is a way to save time at the meeting. But if any of the reviewers wants to discuss an application in the lower half, it can be discussed. Reviewers are probably discussing many more applications than are likely to

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get funded even with our current funding situation. This is an issue where some people want to do it the old way, where every application is discussed. That makes for a long meeting.

Q: How can reviewers account for differences in regional/institutional salaries and in animal costs? And how can reviewers judge the rationale use of supplies?

A: We are not asking them to do that anymore. And the issues that they are talking about are very fine, detailed points that are so variable. What are reviewers going to do with that kind of detailed information in the kinds of grants we are talking about?

NIH final thought: Reviewers have been entrenched in the minute details of the budget for 30 to 40 years, so adapting to this new process is going to take time. We are taking a different approach to budgeting that is, inherently, different from the way we've done things; different from the way reviewers and applicants are accustomed to. But we believe the changes are headed in the right direction. Applicants and reviewers are telling us that the modular grant process is allowing them to focus more of their attention on the science, not on the budget detail, both in preparing applications and in reviewing applications.

We are working hard to educate reviewers and our staff. We have prepared an update on Modular Grant Applications, which can be found on the Web at <http://grants.nih.gov/grants/guide/notice-files/not-od-00-046.html>. By year's end, we will have more data on FY 2000 modular applications and grant awards.

THE MODULAR GRANT: FEATURES AT A GLANCE

- Applies to grant applications requesting up to \$250,000 direct costs per year
- Request total direct costs in modules of \$25,000; no future year escalations
- Typical application will request the same number of modules in each year
- Provide budget narrative regarding all personnel by position, role and level of effort
- Include a total cost estimate for any Consortium/Contractual arrangements
- Additional narrative budget justification required only if there is a variation in the number of modules requested
- Describe specific aims of research ongoing or completed during the last three years as part of the Biographical Sketch. The Biographical Sketch will be limited to three pages
- Recommended adjustments of the budget by the review group in modules
- NIH will request Other Support information "just-in-time" to determine overlap for likely award candidates
- NIH may request (prior to award) additional budget justification "just-in-time" only in exceptional circumstances
- Make non-categorical, total direct cost awards. NIH will not request a detailed budget
- Eliminate the 25% re-budgeting requirement
- Permit all types of administrative supplemental awards

Source: The National Institutes of Health

What We've Been Doing

FASEB President Meets with Congressional Staff About Physician-Scientists Report

On May 18, David G. Kaufman (FASEB President 1999-2000), had a follow-up visit with the staff of Representative Edward Markey, Democrat of Massachusetts, to discuss drafting a bill to establish and fund an educational loan repayment program for physicians interested in pursuing a research career. This program would help reverse a worrisome trend of the declining number of young physician-scientists, which is due, in part, to the enormous debt burden students face upon graduation from medical school and the prospect of lower salaries in a research career versus a career in clinical practice. Representative Markey is a member of the House Commerce Committee and is very supportive of biomedical research and the training of researchers. On an earlier visit this spring, Dr. Kaufman provided Mr. Markey with copies of the FASEB report, "Physician-Scientists: Career Issues and Challenges at the Year 2000" and with the FASEB recommendations for a physician-scientist educational loan repayment program.

FASEB Sends Letter to Clinical Research Roundtable

On June 6, Dr. Kaufman and Mary J.C. Hendrix (FASEB President 2000-2001) sent a letter to the newly established Clinical Research Roundtable emphasizing the importance of streamlining the Institutional Review Board (IRB) review process in order to efficiently translate breakthroughs in basic biomedical research into opportunities to advance the diagnosis and treatment of diseases. The letter can be found at www.faseb.org/opar/humanres/clinreset.html.

FASEB President Meets with Budget Office On Physician Scientists Legislation

On June 27, Dr. Kaufman met with Tom Reilly, Branch Chief for the Office of Management and Budget (OMB), and Mark Garufi, an OMB budget examiner, to talk about legislation for creating a debt-relief program for Physician-Scientists. President Clinton's FY 2001 budget request includes \$1.4 million for a new program, the Extramural Loan Repayment Program Regarding Clinical Researchers, which would cover 13 people as a "foot in the door." Up to 50 percent of the slots would be reserved for people with underprivileged backgrounds. The Administration proposal is for clinical researchers only, although OMB officials said they do not oppose including basic research, too. Mr. Reilly and Mr. Garufi also indicated that they would be supportive of including debt forgiveness language in this year's appropriations bill for the Departments of Labor, Health and Human Services and Education (L/HHS) – from which the budget for the National Institutes of Health (NIH) comes. But they warned that such inclusion could be difficult this year given the many contentious issues plaguing that bill.

FASEB President Makes Presentation To Newly Formed Clinical Research Roundtable

On June 27, the Institute of Medicine held the first meeting of the Clinical Research Roundtable and dedicated most of the public session to a discussion focused on training for clinical researchers, the role of academic medical centers and data

availability on current trends in the support of clinical research. FASEB's David G. Kaufman summarized the FASEB report on Physician-Scientists, which can be found on the Web at www.faseb.org/opar/reports/phys_sci.pdf. To view the Clinical Research Summit's mission, go to www.aamc.org/newsroom/clinres/start.htm.

FASEB Comments on AAU Report On Human Subjects Protections

FASEB President Mary J.C. Hendrix says the recommendations contained in "University Protections of Human Beings Who Are the Subjects of Research," are "thoughtful and timely." The report, released June 29 by the Association of American Universities (AAU), lays out specific recommendations for bolstering protections of human subjects in university-based research. The association is urging its members – 61 leading North American research universities – to adopt the recommendations, which call for the following: Increased oversight of human subjects research on campuses by senior university administrators; mandatory training and testing of all campus personnel directly involved in human subjects research – faculty, researchers, managers, and administrative staff; strengthened training, operations and resources for campus Institutional Review Boards (IRBs); increased resources both to carry out legal and regulatory requirements and to meet the highest ethical and professional standards of protections for human subjects; and voluntary accreditation and other steps to ensure greater public accountability.

"Their focus on the institutional responsibilities integral to carrying out human subjects research will be valuable to the community at large as we re-examine the many different aspects involved in human research protections," Dr. Hendrix said. "FASEB will be reviewing the report and its recommendations in depth, and hope – that as representatives of the individual investigators – we will be able to work in collaboration with AAU to enhance the safety mechanisms protecting the volunteer participants so critical to the translation of biomedical science into clinical advancements." The report can be viewed at www.tulane.edu/~aau/HumSubReport06.28.00.pdf. Printed copies can be ordered from Hanna Crutcher in the AAU office at 202-408-7500.

FASEB's Office of Public Affairs Hires A Director of Legislative Relations

Patrick White, formerly the Director of Public Affairs for the American Association of Immunologists (AAI), joined the Federation of American Societies of Experimental Biology (FASEB) as its Director of Legislative Relations on July 5. Mr. White will serve as FASEB's senior legislative advisor, gather intelligence on legislative issues and assist FASEB leaders by proposing, planning and executing legislative advocacy strategies.

Howard H. Garrison, the Director of FASEB's Office of Public Affairs, said Mr. White was the unanimous choice of the search committee. "We were very impressed with his accomplishments, his approach to issues and his plans for legislative advocacy," Dr. Garrison said. "I have known Pat for seven years and have the highest respect for his insight, judgment and political instincts. Through his earlier experience on Capitol Hill and as the Director of Public Affairs for AAI, he has formed excellent relationships with key members of Congress, their

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legislative staff and leaders in the advocacy community. With Pat's leadership on legislative strategies and initiatives, FASEB will be able to expand its successful public affairs program and provide even better advocacy and support for researchers in the biomedical sciences."

Before joining AAI in 1993, Mr. White served as the principle aide for legislative activities and external affairs for President George Bush's Science Advisor, D. Allan Bromley. His White House Office of Science and Technology Policy experience followed ten years on Capitol Hill, including service as Chief of Staff for former Congressman Bob Davis, Republican of Michigan. A graduate of Georgetown University, Mr. White has an M.A. from George Mason University (GMU), and is an adjunct faculty member in GMU's Department of Public and International Affairs.

"Our congressional champions – John Porter, Arlen Specter, David Obey and Tom Harkin – have been very generous to biomedical research and NIH," Mr. White said. "I will be privileged to assist our nation's most distinguished scientists in continuing FASEB's successful advocacy."

FASEB Considers Proposal to Develop An IRB Accreditation Program

On July 11, Sidney H. Golub, FASEB's Executive Director, attended a meeting to hear a proposal by the newly created Association for the Accreditation of Human Research Protection Programs (AAHRPP). This group was formed by Public Responsibility in Medicine and Research (PRIM&R), a non-profit group dedicated to the consistent application of ethical precepts in medicine and research. AAHRPP's objective – if PRIM&R can raise the money needed to run it – would be to provide a process of voluntary peer review and education among entities concerned with research involving humans, in order to promote preservation of the rights and welfare of subjects in research, and to promote compliance with the applicable ethical and regulatory standards.

It plans to develop a self-assessment instrument to be sent to institutions desiring accreditation. The model presented at this meeting calls for site visits, during which Institutional Review Boards, administrators and investigators are educated on the makeup of a proper program of protections. Accreditation would be for a three-year period; with provision for early reevaluations should problems occur. Joan Rachlin, the president of PRIM&R, said that it would take \$1 million a year for the next five years to support AAHRPP's objectives. FASEB is among the several advocacy groups considering backing the group.

FASEB President Offers Assistance to HHS on Improving Human Subjects Protections

In a July 11 letter to Donna E. Shalala, the Secretary of the Department of Health and Human Services, FASEB President Mary J. C. Hendrix offered her assistance in looking for ways to strengthen the safeguards for human research subjects. "In order to both safeguard human subjects and meet the needs of patients anticipating new therapies, we must come together as a community of scientists, institutions and policy makers to assess and address the issues at hand," Dr. Hendrix wrote. "If FASEB can be of any assistance to you or your staff in your

efforts to implement these goals, please do not hesitate to call on us. It would be an honor for us to work with you!" The full text of the letter can be found at www.faseb.org/opar/news/news.html.

FASEB President Meets with USDA About Genetically Modified Foods

As part of her effort to build upon and improve FASEB's working relationships with federal agencies, Dr. Hendrix met with Undersecretary of Agriculture for Food Safety, Catherine E. Woteki, on July 12. Dr. Hendrix and Dr. Woteki discussed genetically modified foods and the role of the scientific community in responding to questions raised by the general public. Dr. Woteki, a member of the American Society for Nutritional Sciences, said that FASEB's Federal Funding Consensus Report continues to have a significant impact on public policy, and officials at the U.S. Department of Agriculture (USDA) appreciate FASEB's policy statements on the importance of agricultural research. She discussed the activities currently underway at the USDA and asked for input from FASEB scientists on a draft report titled "Public Health Action Plan to Combat Antimicrobial Resistance."

FASEB Holds Workshop on Pain and Distress in Laboratory Animals

On August 6 and 7, FASEB held a workshop titled "Setting the Agenda on Animal Welfare." The event brought together representatives of the biomedical research and laboratory animal science communities, along with those involved in the actual study of pain and distress to discuss the science and policy of this issue. The conference was co-chaired by Dr. Hendrix, Michael Kastello of Merck and Company, and J.R. Haywood, a member of FASEB's Science Policy Committee. The program provided an overview of the current policy debate and current scientific understanding of pain and distress. Workshop participants broke up into discussion groups to consider definitions of pain and distress, how best to assess pain and distress, how pain and distress should be addressed in Institutional Animal Care and Use Committees (IACUC) protocol reviews and what regulatory or policy changes can best serve to minimize pain and distress.

On July 10 the USDA's Animal and Plant Health Inspection Service (APHIS) published a Federal Register notice calling for comments on the definition and reporting of pain and distress under the Animal Welfare Act. The full text of the request is available in PDF and HTML formats on the USDA website at www.aphis.usda.gov/ppd/rad/webrepor.html. It is listed as Docket #00-005-1 under the title "Animal Welfare; Definitions for and Reporting of Pain and Distress," dated 7/10/00. The public has until September 8, to provide the agency with comments about the current system and possible alternatives that are under consideration. APHIS plans to use these comments to decide whether to replace or modify the current classification and reporting system used by Institutional Animal Care and Use Committees in reviewing research protocols.

The organizers of the FASEB workshop hope that the discussions will inform the scientific community's response to the U.S. Department of Agriculture's request for public comments on its proposed changes to the definition of pain and distress. **[FN]**

Society News

Former FASEB President Chairs ASBMB Public Affairs Team

William R. Brinkley, former FASEB President and Dean and Vice President of the Graduate School of Biomedical Sciences at Baylor College of Medicine, has accepted the job of Chairman of the American Society for Biochemistry and Molecular Biology's (ASBMB) Public Affairs Advisory Committee, effective July 1, 2000.

Dr. Brinkley brings a wealth of experience to the job. He is Distinguished Service Professor of Molecular and Cellular Biology at Baylor, and his research on mitosis and genomic instability has received continuous funding from the National Institutes of Health (NIH) for over 30 years. He is a former President of the American Society for Cell Biology (ASCB). In his years of activism with ASCB, FASEB and various constituent groups, he has proven to be a thoughtful and forceful advocate for biomedical research public policy interests.

Dr. Brinkley steps into the job following the lengthy chairmanship of Howard K. Schachman, a former president of ASBMB (and also of FASEB) and the recipient of FASEB's 1994 Public Service Award. Dr. Schachman has agreed to continue on the Committee as a Distinguished Advisor.

ASPET Offers 3 Short Courses At Experimental Biology 2001

In conjunction with Experimental Biology '01 in Orlando, Fla., the American Society for Pharmacology and Experimental Therapeutics (ASPET) will be holding three short courses, two half-day courses and one full-day course. These short courses are satellite meetings to EB'01 and will require separate registration. Registrants for these short courses will receive a course syllabus as well as the opportunity to interact with faculty on an individual basis during breaks. Space is limited, so pre-registration is encouraged. On-site registration will be available, at a significantly higher fee, until the course is filled. Following are summaries of the courses:

Pharmacology of Inflammation: Basic Mechanisms and Therapeutic Treatments. Inflammation is the result of a highly complex process involving the

vascular system, blood-borne cells, immunomodulatory cells, target cells and numerous, diverse mediators. Inflammation occurs after injury and also is associated with disease in several organ systems. Several new classes of anti-inflammatory drugs have recently become available for therapy. The purposes of this Short Course are to provide an overview of inflammatory processes and to introduce key concepts for understanding the mechanisms of action of anti-inflammatory drugs.

Behavioral Pharmacology for Gene Jockeys and Molecular Biologists. Are my transgenic mice depressed, sedated, lazy and exhausted or just lacking motivation? Are my mu knockouts feeling no pain? Are my inbred mice drinking alcohol because they like the taste, are very thirsty or just want to get drunk? Methods for answering these and other questions will be presented at this short course, which is intended for scientists working at molecular levels who now want to begin to relate their observations to the behavior in the whole animal, but who have little or no training in this area. The course will review modern automated methods for the study of both unconditioned and conditioned behaviors, including techniques for the measurement of motor activity, conditioned behavior, learning and memory, and other complex behaviors.

Imaging Receptor Pharmacology In Vivo: New Data for Clinical Trials. Positron emission tomography (PET) and photon emission computerized tomography (SPECT) are powerful techniques that can be used to examine drug pharmacodynamics and pharmacokinetics in humans. With newer cameras for small animals, receptor pharmacology can be imaged in genetically altered animals as well. This short course will present the basis by which these techniques work and how they can be used to examine receptor occupancy, density, affinity, and pharmacokinetic parameters in vivo. Examination of these processes in human volunteers and in patients provides a unique opportunity to address several issues important in clinical trials such as proper dosing, duration of drug action, potential side effects and drug interactions.

Excellence in Science Awardee To Do Lecture at ASCB Meeting

Y. Peng Loh, who last year was selected to receive the 2000 FASEB

Excellence in Science Award, will present her Award lecture during the December meeting of The American Society for Cell Biology (ASCB) in San Francisco, Calif. Dr. Loh's lecture is scheduled for 7:30 p.m. on December 10, 2000 in the



Y. Peng Loh

Moscone Convention Center. The title of the lecture is "Regulated Secretory Protein Sorting in Endocrine Cells: Unmasking the Novel

Signals, Receptors and Lipid Rafts."

Dr. Loh, who also holds a membership in The Endocrine Society, has been an intellectual leader in a critical area of cell biology concerned with protein processing and control of protein movements within the cell. During her career of more than two decades, she has made major contributions in uncovering the molecular mechanisms underlying the intracellular sorting of peptide hormones and neurotransmitters to the regulated secretory pathway. She has also been instrumental in identifying the proteolytic events and enzymes involved in the processing of polyvalent prohormones to biologically active peptides in the endocrine and nervous systems. Her cell biological studies have recently provided her colleagues at the National Institute of Child Health and Human Development at the National Institutes of Health with insight into the molecular basis for certain endocrine diseases in man and rodents (e.g. Hyperproinsulinemia-diabetes Syndrome), which relates to defects in intracellular routing and processing of hormones.

"Dr. Loh has made outstanding scientific contributions and is a leader in the field of peptide hormone and neurotransmitter sorting and processing," wrote Phillip G. Nelson, the chief of the Laboratory of Development Neurobiology at the NICHD, in a letter to FASEB nominating Dr. Loh for the award. "She has also demonstrated a strong commitment to mentoring and to advancing the career of young scientists."

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Villa-Komaroff to Deliver E. E. Just Lecture at ASCB Meeting

Lydia Villa-Komaroff, Vice President for Research at Northwestern University, will give the 7th Annual E.E. Just Lecture at the 40th ASCB Annual Meeting in December. Dr. Villa-Komaroff, a neurobiologist, also currently serves on the ASCB Council. Her scientific contributions include early work on the proinsulin gene and its processing, “now considered classic” according to National Institute of Neurological Disorders & Stroke Director Gerald Fischbach. The Lecture, sponsored by the ASCB Minorities Affairs Committee, is named in memory of E.E. Just, an early 20th century zoologist.

ASCB Minorities Affairs Committee Announces Meeting Opportunities

MAC travel awards to attend the ASCB 40th Annual Meeting are available to minority scientists and students who are presenting their research findings during this meeting. Special travel awards are available to scientists

reporting research in the area of aging. Because submission of an abstract is a condition of the MAC travel award, it is important that students and faculty are aware of the ASCB abstract deadline of July 30. MAC Travel award application can be printed from the ASCB Website: www.ascb.org/ascb, under “Meetings” select “Program & Meeting Info.”

In addition to the meeting scientific sessions, the ASCB MAC offers a number of mentoring and networking opportunities for minority students and teaching and research scientists. On December 9, from 11 a.m. to 3 p.m., the MAC Mentoring Symposium will explore “Survival Skills for Scientists in the New Millennium.”

The Symposium is followed by the Minorities Poster Session & Competition, which is organized to provide opportunities for minority scientists to gain recognition for their work, to network with interested senior scientists and to gain guidance and reinforcement for pursuit of careers in science. Meeting attendees who plan to participate but have not applied for a travel award must complete the MAC Poster Session Registration Form, found on the ASCB Website. This poster session is

held in addition to the general meeting poster sessions. Additional networking opportunities are provided during lunch and the reception that takes place during the poster session.

On Sunday, MAC travel and poster award recipients are introduced during the MAC Award Recognition and Mentoring Luncheon. The lunch is followed by the E.E. Just Lecture, during which an eminent minority scientist presents his/her research findings.

The MAC-sponsored activities are free; they are supported by the MAC MARC grant, the Leadership Alliance and the ASCB membership. To facilitate meeting preparation all who plan to participate should register in advance for the Saturday Mentoring Symposium and Poster Session, using the Advance Meeting Registration form. Meeting registration is not required to attend these functions, which take place before the official opening of the Annual Meeting. The Minorities Affairs Committee Poster Session Registration Form must be completed if session registrants plan to compete in the poster competition but have not applied for a MAC travel award. Meeting registration is required for Sunday activities.

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A special advance registration rate of \$20 is offered to undergraduate students who register by October 2 to attend the Annual Meeting. This rate is not available to students who register after the October 2 deadline.

Laitman, Gage Slated for AAA Keynote Talks at EB 2001

Jeffrey T. Laitman (Mount Sinai School of Medicine and City University of New York) and Fred H. Gage (Salk Institute for Biological Studies) will be featured speakers at EB 2001 in Orlando, with Dr. Laitman giving the AAA keynotes address on "The Origin of Speech," and Dr. Gage presenting the Cajal Club's Pinckney J. Harmon Lecture.

Dr. Laitman's research focuses on the comparative anatomy, development and evolution of the mammalian aerodigestive tract and contiguous areas of the cranial base. In the area of development, Dr. Laitman and his colleagues have made considerable strides in investigating change in the breathing, swallowing and vocalizing patterns of human infants. His research on the evolution of the aerodigestive tract has helped to usher in a new methodology that enables the use of fossil remains as a guide to reconstructing the vocal tract of human ancestors. Dr. Laitman's work in this area has had particular implications for understanding the origins of human speech and language.

Dr. Gage's research is on degeneration and regeneration in the adult central nervous system. While adult CNS neurons have been considered post-mitotic and refractory to regeneration, recent findings challenge this doctrine. Evidence now supports the assertion that stem cells reside within the adult brain, which may act as a source for neurogenesis in restricted sites of the adult brain. Dr. Gage's aim is to identify the cellular and molecular factors that control the proliferation, migration and differentiation and determine the fate of the adult neuron stem cells. The adult CNS has been characterized as resistant to regeneration because of the absence of required growth factor and substrate molecules present during development. Dr. Gage hopes to define spatial and temporal conditions that permit functional regeneration in the adult nervous system.

AAA Accepting Nominations For Three key Honors

The American Association of Anatomists (AAA) is now accepting nominations for three of its key honors—the R.R. Bensley Award, the Charles Judson Herrick Award and the Basmajian/Williams & Wilkens Award. The R.R. Bensley Award is presented to someone who has made a distinguished contribution to the advancement of anatomy through discovery, ingenuity and publications in the field of cell biology. The recipient presents a lecture at the AAA Annual Meeting (March 31 - April 4, Orlando). The Charles Judson Herrick Award, which also includes an Annual Meeting lecture, recognizes young investigators who have made important contributions to the field of comparative neuroanatomy and have demonstrated remarkable promise of future accomplishments. The area of comparative neurology is broadly defined; previous awardees are outstanding scientists who have made contributions to areas of neuroscience, including neurochemistry, development, neurocytology, neuroendocrinology, neurophysiology and molecular neurobiology. Eligibility is restricted to individuals who have completed their doctorate degrees within the past 12 years.

The Basmajian/Williams & Wilkens Award recognizes AAA members teaching human or veterinary gross anatomy, no more than 10 years beyond accepting a faculty position, who have made outstanding accomplishments in anatomical sciences research and have demonstrated excellence and commitment to the teaching of gross anatomy.

While nominations must come from an AAA member, Bensley and Herrick recipients need not be members. Bensley and Herrick nominations should include: (1) the nominator's letter; (2) the *curriculum vitae* of the nominee; and (3) several representative papers. Basmajian nominations should include: (1) the nominator's letter; (2) one additional letter of recommendation (not necessarily from an AAA member); (3) a *curriculum vitae* of the nominee with complete bibliography; and (4) up to five reprints. All three awards will be presented at the AAA Annual Banquet in Orlando. Submit nominations to: AAA Awards Nomination, 9650 Rockville Pike, Bethesda, Md. 20814-3998. All nominations are due September 15. For further details, go to www.anatomy.org/anatomy/nawardnom.htm or contact AAA at 301-571-8314.

The Protein Society Holds 14th Annual Symposium

At the 14th Annual Symposium of The Protein Society, August 5-9 in San Diego, the president, Chris Dobson of Oxford University, will present the Stein and Moore Award sponsored by the Merck Foundation to Brian Matthews of the University of Oregon; the Young Investigator Award sponsored by Dupont Pharmaceuticals to David Baker of the University of Washington; the Hans Neurath Award sponsored by the Hans Neurath Foundation to Janet Thornton of University College London; the Christian Anfinsen Award sponsored by Aviv Associates to Stephen Benkovic of Pennsylvania State University; and the Amgen Lecture Award to David Eisenberg of UCLA.

Four FASEB Society Members Among the 20 Chosen as 2000 Pew Scholar Scholars in The Biomedical Sciences

Four members of FASEB societies were among 20 biomedical researchers chosen in June as 2000 Pew Scholars in the Biomedical Sciences. Each investigator will receive \$240,000 over a four-year period to support his or her research.

The award – given by The Pew Charitable Trusts – is granted to young investigators who show outstanding promise in the basic and clinical sciences to encourage scholarly innovation in their research and to help them advance the state of knowledge in the biomedical sciences. Since 1985, Pew has provided more than \$65-million for the support of 320 scholars, helping them to establish their laboratories and continue research in areas ranging from ADIS to cancer to childhood infectious diseases and to diseases affecting the elderly.

The FASEB member winners are: Dorit Hanein, assistant professor, The Burnham Institute, La Jolla, Calif., Biophysical Society (BPS); Lise R. Heginbotham, assistant professor, Department of Molecular Biophysics and Biochemistry, Yale University, BPS; R. Dyche Mullins, assistant professor, Department of Cellular and Molecular Pharmacology University of California, San Francisco, American Society for Cell Biology; and Venkatesh N. Murthy, assistant professor, Molecular and Cellular Biology, Harvard University, BPS. **FN**