

# ASBMB NEWS NEWS NEWS

Your Newsletter...

A Bimonthly Publication of the American Society for Biochemistry and Molecular Biology ★ Mar/Apr 2001, Vol. X, No. 2

## ASBMB RESPONSE TO PUBMED CENTRAL AND THE PUBLIC LIBRARY OF SCIENCE BOYCOTT

The publication of *Journal of Biological Chemistry (JBC)* On-line <<http://www.jbc.org>> in 1995 by the American Society for Biochemistry and Molecular Biology (ASBMB) and our partner, Stanford University's HighWire Press, initiated efforts to grant broad, barrier-free access to the literature. Over the past 3 years, we have released the back issues of *JBC* On-line free to anyone with Internet access after an average of 6 months from the initial publication date. Furthermore, in 2000, we initiated *JBC* Papers in Press which releases all accepted *JBC* papers on the day they are accepted and they remain free forever to anyone with Internet access <<http://www.jbc.org>>.

Recently, we have initiated a program of free access to all *JBC* papers for scientists in economically developing countries in order to broaden access worldwide. ASBMB has been a leader in making the research literature more accessible to everyone because that is the mission of our Society.

Recently, there has been a great deal of discussion about a proposal from the National Center for Biotechnology Information (NCBI) of the NIH to build and provide a freely accessible repository of life science research literature called PubMed Central (PMC). In addition, PMC has been vigorously promoted by a group calling themselves The Public

Library of Science (PLS). The PLS has circulated a letter that sets criteria for journals to comply with or face a boycott by the signatories. PLS proposes:

"To encourage the publishers of our journals to support this endeavor, we pledge that, beginning in September, 2001, we will publish in, edit or review for, and personally subscribe to, only those scholarly and scientific journals that have agreed to grant unrestricted free distribution rights to any and all original research reports that they have published, through PubMed Central and similar online public resources, within 6 months of their initial publication date."

Clearly the PMC objective to build a freely accessible repository for the biomedical literature is laudable and in apparent agreement with goals of the ASBMB and the *JBC*.

Yet ASBMB/*JBC* is not considered in compliance with the demands of the PLS and we are thus a target of the boycott effort. Since *JBC* Papers in Press and *JBC* back issues are available free, why are we not in compliance? This is because imbedded in the statement above is a more subtle condition:

"...that have agreed to grant unrestricted free distribution rights to any and all original research reports that they have published, through PubMed Central and similar on-line public resources..."

What does this mean? It means that in order to comply with the PLS demands, journals must not only make their content free but also transfer all their free content to PMC and allow, through PMC, anyone, presumably even those who would then sell our content, "unrestricted free distribution rights". The PLS boycott proponents argue that as long as the free research reports are retained solely at the publisher's web site they are not "free" and remain "under publisher control". Yet the ASBMB and many other targets of the boycott are non-profit society publishers, under the control of scientists who are the authors and readers, reviewers and editors of the articles being published.

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## ASBMB News

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### Deadline for upcoming issues

Mar/Apr 2001: February 2

May/June 2001: April 6

July/Aug 2001: June 1

Sep/Oct 2001: August 3

Nov/Dec 2001: October 5

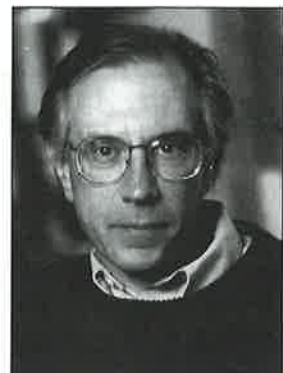
Jan/Feb 2001: December 7

## INEFFICIENT TEACHING—WE NEED MORE OF IT

by Thomas R. Cech

President, Howard Hughes Medical Institute

**D**uring my 23 years at the University of Colorado at Boulder, I've always had undergraduates in my research group. Some foreshadow their arrival with professional-looking résumés, while others wander in casually. Some grab a foothold by washing glassware and then wrangle their way into a project. The students come from our own campus or from elsewhere, looking for financial support or working for academic credit.



Thomas R. Cech

It's a story repeated countless times in research universities. And regardless of how students make their way into a lab, they're in for an experience far different than in any classroom. It's an experience where knowing how to make up a 0.050 M solution is not worth 5 points on the next exam but may determine whether their experiment works. An experience where they have access to instruments and know-how as current as those in biotech companies. An experience where others in the lab are happy to discuss a problem but can't guarantee an answer, where hard work is never ridiculed, where even the most sensible-sounding explanation for an observation is treated with skepticism, and where "proven" isn't part of the vocabulary.

Costly and time-consuming, undergraduate research is the most inefficient educational experience we give our undergraduates. It's also the most life-transforming experience for many of them, and the one that best develops skills that employers seek.

For scientists, there's a payoff that goes beyond the good feeling of contributing to the institution's educational mission. Graduate students and postdocs who seek to become professors or biotech group leaders learn to train and mentor students. Bright, inquisitive undergraduates also ask naïve questions that cause scientists to sharpen or even refocus their scientific questions.

Now that I'm the president of HHMI, I view the undergraduate research scene from a different vantage point. Through its undergraduate grants program, HHMI has contributed more than \$476 million to 117 colleges and 115 universities since 1988, with approximately \$170 million going for undergraduate research. The program has greatly expanded research opportunities for undergraduates, spawned new research courses, encouraged more faculty to become involved and promoted outreach to local schools.

Yet many questions remain. For instance, how do we make research experiences even more widely available to undergraduates? How do we help postdocs develop teaching skills, and get active professors more involved? How do we provide non-science majors with opportunities to explore questions whose answers are truly unknown? At HHMI, we're working hard to contribute solutions. ★

## SPECTER/HARKIN RESOLUTION CALLS FOR BOOST IN NIH FUNDING

In February, Senators Arlen Specter (R-PA) and Tom Harkin (D-IA) introduced a resolution (S. Res. 19) to express the Sense of the Senate that the funding for the NIH should be increased. A bipartisan group of 11 other senators cosponsored the resolution. A press release issued by Senator Specter's office notes that:

"...the resolution calls for the fiscal year 2002 Budget Resolution to include an additional \$3.4 billion to be allocated for biomedical research at the National Institutes of Health. The following Senators joined Senator Specter as original cosponsors of the measure: Thad Cochran (R-MS), Susan Collins (R-ME), Mike DeWine (R-OH), Bill Frist (R-TN), Tim Hutchinson (R-AR), Barbara Mikulski (D-MD), Patty Murray (D-WA), Rick Santorum (R-PA), Paul Sarbanes (D-MD), Charles Schumer (D-NY), and Olympia Snowe (R-ME).

"Senator Specter believes it is clear that the United States' substantial investment in biomedical research is paying off, and that increased funding must be continued in order to convert scientific advances into treatments and cures. Senator Specter called on his colleagues to cosponsor his resolution and join him in the fight to accomplish the vital goal of doubling NIH funding by fiscal year 2003."

Both FASEB and the Ad Hoc Group for Medical Research Funding have recommended the NIH budget be increased by \$3.4 billion in FY 2002, a 16.5% increase over the FY 2001 figure of \$20.3 billion. ASBMB also supports this figure and is working to bring it about. The White House has asked for an increase for NIH of \$2.8 billion this year—the largest dollar increase in NIH history, but still some \$600 million short of what is needed to keep NIH on the doubling track by 2003. ★



Sen. Arlen Specter (R-PA)



Sen. Tom Harkin (D-IA)

## ASBMB AWARDS HONOR OUTSTANDING SCIENTISTS

Six of our country's finest biomedical scientists were honored during the ASBMB annual meeting in Orlando, Florida by receiving ASBMB's top science awards. As a look below will show, this year's award winners show the broad diversity of scientific interest that is a hallmark of the disciplines of biochemistry and molecular biology.

### ASBMB-Amgen Award

Dr. Thomas Ried, National Cancer Institute, NIH, was this year's recipient of the ASBMB-Amgen Award. Dr. Ried was honored for his development and application of the technique of spectral karyotyping (SKY), where each chromosome is "painted" a unique color and displayed through the use of an interferometer-based comprehensive wavelength imaging system. A colleague has called Dr. Ried "highly productive, highly collegial, invested in his research and in the dissemination of [SKY] technology through the biomedical community."

Dr. Ried received his M.D. from the University of Heidelberg in 1989, and has been an active researcher since then in both Europe and the United States. He holds membership in five scientific societies, and is a reviewer for over two dozen journals and grant programs in the United States and abroad. He also holds five patents, and is the organizer of a Cold Spring Harbor Laboratory Course on "Advanced Molecular Cytogenetics". Dr. Ried's lecture was on the topic of *Pattern and Mechanisms of Chromosomal Aberrations in Cancer Cells*.



Dr. Thomas Ried

### Fritz Lipmann Lectureship

Dr. Heidi E. Hamm, Professor of Pharmacology and Chair of the Department of Pharmacology at Vanderbilt University, was this year's recipient of the Fritz Lipmann Award.

Dr. Hamm received her B.A. from Atlantic Union College in 1973, and her Ph.D. from the University of Texas at Austin in 1980. She recently moved to Vanderbilt from Northwestern University, and served as Program Chair for the ASBMB's 1998 meeting.

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## ASBMB Awards from page 3

Dr. Hamm's work at Northwestern and now at Vanderbilt focuses on the structure and function of GTP binding proteins, and the molecular mechanisms by which activated receptors cause the activation of G proteins and effector enzymes in cellular signal transduction. Current and future projects in her lab include seeking to understand the very different intrinsic GDP release rates among different G protein  $\alpha$  subunits, and designing and producing tools that will specifically block signaling pathways.

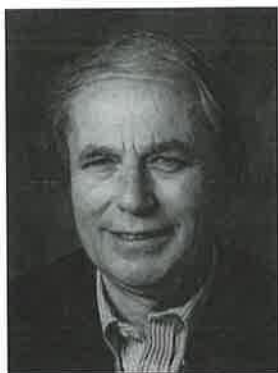
Dr. Hamm lectured on *Regulation of G Protein-Mediated Signal Transduction*.



Dr. Heidi E. Hamm

## ASBMB-Merck Award

**D**r. Avram Hershko, Technion, Israel, and Dr. Alexander Varshavsky, California Institute of Technology, were this year's recipients of the ASBMB Merck Award. They were recognized for their independent and complementary discoveries in the 1980s that revealed the ubiquitin system and its crucial functions in cellular regulation. This field was created in the 1980s in the main through their work. It was also in the 1980s that the first discoveries were made, by Dr. Varshavsky and coworkers, that eventually led, through the work by many laboratories, to the current preeminence of the ubiquitin system in cancer research. As one colleague noted, "By the late 1980s, the complementary and independent discoveries by the Laboratories of Hersko and Varshavsky transformed the realm of intracellular protein degradation from a relative backwater of cell biology into a broad and dynamic subject of great importance. At the present time, ubiquitin studies are one of the major arenas in modern biology, the point of convergence of many disparate disciplines. It is rare in the history of science that a huge, complex, and singularly important field is founded in the main by just two laboratories."



Dr. Avram Hershko

Dr. Hershko was born in Hungary and immigrated to Israel in 1950. He received his M.D. in 1965, and his Ph.D. in 1969, both from The Hebrew University-Hadassah Medical School. He has received a variety of prizes in his career, including the Weizmann Prize for Sciences, and the Israel Prize in Biochemistry and Medicine. He has more than 60 scientific publications to his credit.

Dr. Varshavsky was born in Moscow in 1946. He earned the Ph.D. in biochemistry from the Institute of Molecular Biology in Moscow in 1973, and came to the United States in 1977, when he became an assistant professor of biology at MIT. In 1992, having become a professor of biology at MIT, he became the Howard and Gwen Laurie Smits



Dr. Alexander Varshavsky

Professor of Cell Biology at the California Institute of Technology. Dr. Varshavsky was elected to the National Academy of Sciences in 1995, and holds a Merit Award from the NIH, awarded in 1998. He has published almost 150 scientific papers since 1968. He and Dr. Hershko (along with another colleague) shared the 2000 Albert Lasker Award for Basic Medical Research for their discoveries related to ubiquitin.

Dr. Hershko's lecture in Orlando was on *The Ubiquitin System for Protein Degradation and Some of its Roles in Cell Cycle Control*. Dr. Varshavsky spoke on *The Ubiquitin System and the N-End Rule Pathway*.

## Rose Award

**M**arc W. Kirschner is this year's recipient of the Rose Award. Dr. Kirschner is the founding Chair of the Department of Cell Biology and Carl W. Walter Professor of Cell Biology at Harvard Medical School, and a founder of Harvard's Institute for Chemistry and Cell Biology. A graduate of Northwestern University, he received his Ph.D. from the University of California, Berkeley. Prior to joining the faculty at Harvard Medical School,



Marc W. Kirschner

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## ASBMB Awards from page 4

he was a professor at the University of California, San Francisco. He and John Gerhart are co-authors of *Cells, Embryos, and Evolution* (Blackwell, 1997). Dr. Kirschner is a member of the National Academy of Sciences and the American Academy of Arts and Sciences, and has served on the Advisory Committee to the Director of the National Institutes of Health and as President of the American Society for Cell Biology. He was elected as a Foreign Member of both the Royal Society of London and the Academia Europaea in 1999. Dr. Kirschner's laboratory investigates three broad, diverse areas: regulation of the cell cycle, the role of cytoskeleton in cell morphogenesis, and mechanisms of establishing the basic vertebrate body plan. Dr. Kirschner's lecture was on *Proteolysis and the Cell Cycle*.

## Schering-Plough Scientific Achievement Award

Dr. Stephen P. Bell, Massachusetts Institute of Technology, delivered the Schering-Plough Scientific Achievement Lecture at the ASBMB annual meeting this year. Dr. Bell received the award for his ground-breaking discoveries in the fields of DNA replication and cell-cycle control and "stands out as one of the leading scientists of his generation," according to one colleague. "He has established himself as a world leader in studies of the mechanisms of chromosome replication, a process that is essential to the complete molecular understanding of biology. He chooses important problems that are extremely difficult but produces science that is original, important, and rigorous." In addition, he is known for his teaching skills; in 1998, he received MIT's highest educational honor, the Everett Moore Baker Award, given by undergraduates for excellence in teaching.



Dr. Stephen P. Bell

Dr. Bell received his Ph.D. in biochemistry in 1990, and joined the MIT faculty in 1994 after postdoctoral studies at Cold Spring Harbor Laboratory. Dr. Bell's Orlando lecture was on *Building and Dismantling Protein Complexes at Eukaryotic Origins of Replication*. ★

## BUSH BUDGET OUTLINE: GOOD NEWS FOR NIH, BAD FOR NSF

The President released his budget proposals for FY 2002 at the end of February, and the news regarding science funding is decidedly mixed. Here's a brief summary of what the President has asked for.

### NIH Doubling Effort to Continue

The good news for science in the Bush budget proposal is that the administration proposes to continue the NIH doubling plan started in FY 1999; the administration proposed to increase the NIH budget by \$2.8 billion, to a total of \$23.1 billion. This is the largest increase in actual dollars ever proposed for NIH, and works out to about a 13.8 percent increase. While this is very positive news given how many other federal programs are being cut or held static in the Bush proposal, it still falls short of what is needed to continue the doubling plan adopted in 1999, and which the Bush campaign endorsed. The proposed increase would have to be boosted an additional \$600 million, to \$3.4 billion, to keep the five-year doubling plan on track. ASBMB, along with most of the rest of the biomedical research community, has endorsed a \$3.4 billion increase in NIH this year.

### NSF Is a Problem...

Unfortunately, the Bush budget plan only asks for a \$56 million, 1 percent increase for the National Science Foundation, after a 14 percent increase last year. It also requires NSF to begin a \$200 million "President's Math and Science Partnership" initiative to provide funds for States to join with institutions of higher education in strengthening math and science education in grades K-12. Most of this is not new money—\$110 million is to be redirected from existing NSF education programs.

The outline states that graduate stipends for the Graduate Research Fellowship, Graduate Teaching Fellowships in K-12 Education, and Integrative Graduate Education and Research Traineeships are to be increased, but it does specify by how much.

The Administration is also taking a skeptical look at the notion that increased size and duration of NSF research grants is needed to conduct research better. As the budget outline notes:

"NSF has increased grant size and duration in previous years, particularly through its priority research areas; however, there is little documentation that this is having a positive impact on research output. With the assistance of U.S. academic research institutions, NSF will develop efficiency measures of the research

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## ASBMB Response from page 1

ASBMB has decided that, while committed to barrier-free access to our research papers, we will not transfer our free content to PubMed Central. There are several reasons for this decision that have nothing to do with wanting to retain "control" of the content which we already make freely available. The "unrestricted free distribution" requirement concerns us because there is no mechanism to insure the fidelity and integrity of the re-distributed material. Inadvertent alteration of the *JBC* research record can easily happen in repeated transfer from one site to another. Those who have experience with commercial research consolidators who re-publish papers from various journals and sell them at their Web sites understand the problems that re-publication/redistribution can create. Also worrisome is the possibility that anyone could deliberately alter research reports for any purpose and readers could never be confident that the reproduced material was authentic or accurate. Furthermore, a PMC site that contains only the older articles is only a part of the *JBC*. Scientists won't be well served by segregating the older literature from the current literature. Further, the articles that are re-posted by PMC won't have the same hyperlinks to free full text of cited references in the article. The *JBC* On-line is the only complete and integrated journal view of all the published content of the *JBC* since 1995; a project is now underway to add 15 more years of back content to the *JBC* On-line site all of which will be free.

Other concerns about PMC persist as well. The PMC staff assert that all the research reports must be on one server or system in order to implement novel "dynamic" search tools. Yet there has never been any description of the tools they have developed or why the papers must be at one site in order to be searched. Additionally, PMC offers to serve as the digital archive for the biomedical literature, which could indeed be a useful service. Archiving digital material remains a very difficult challenge but the PMC offer again has little description of the archiving procedures. Do they have the endorsement of librarians and archivists? Will the archive last 500 years? Moreover, we are concerned about the technical reliability of PMC. PMC has been operating for over a year and as of March 2001 only about 10 journals have their papers posted at PMC. For some of those who have participated, there have been technical problems. Furthermore, PubMed, as opposed to PMC, has also recently had problems in posting citations for new papers resulting in over a month delay to the consternation of authors and readers. This performance record does not instill confidence that the PMC effort will be technically sound and reliable.

There are also questions, both practical and of principle, about whether one large government agency is an appropriate place to house the world's biomedical literature. Practically, can PMC store and distribute the thousands of biomedical journals that currently exist? Will the NIH, as a consequence of government oversight, be restricted in what kinds of research can be posted in PMC? Is a single central repository obsolete in the age of the World Wide Web with transparent linkage between different sites? Lastly, is it appropriate for a taxpayer supported government agency to compete with non-profit Society publishers?

We are pleased that PMC shares our key objective to provide free access to the biomedical literature but because of our concerns about the technical performance of PMC, their unwillingness to fully disclose their specific plans and programs and the potential redistribution problems, we have proposed that we would utilize the strengths of the Web and participate by linking from the PMC site to the *JBC* site. This proposal has been repeatedly rebuffed.

Finally, if one objective of PMC is to collect large numbers of biomedical journals at one site in order to facilitate searching, such a large collection already exists at Stanford University's HighWire Press <<http://highwire.stanford.edu>> co-publisher of *JBC* On-line. HighWire Press currently hosts on-line editions of 240 journals including most of the journals now participating in PMC and over 40 of the 100 most-frequently-cited science journals in the world, including journals such as *Science*, *JBC*, *PNAS*, *New England Journal of Medicine*, *Cancer Research*, *Circulation*, *Journal of Clinical Investigation*, *EMBO Journal*, *Blood*, *Journal of Cell Biology*, *Journal of Experimental Medicine*, *Journal of Virology*, *American Journal of Physiology*, *Journal of Neuroscience*, *Journal of Immunology*, and *Molecular Biology of the Cell*. This translates into about 250,000 free research reports. They have developed new search tools and several archiving proposals are currently being explored. HighWire Press will continue to provide the biomedical community broad, barrier-free access to the world's largest digital research library of the biomedical sciences.

We hope that *JBC* authors, readers, editors, reviewers and subscribers recognize and appreciate our efforts to serve the world's biological sciences community as broadly as possible, and will continue to show the loyalty, support and trust that we have enjoyed in the past.

Robert D. Wells, Ph.D.  
President, ASBMB

Herbert Tabor, M.D.  
Editor, *J. Biol. Chem.*

## ORI PROPOSALS ON INSTRUCTION IN “RESPONSIBLE CONDUCT OF RESEARCH” NOW ON HOLD

The Public Health Service’s Office of Research Integrity (ORI) has announced that it has “indefinitely suspended” implementation of its “Proposed Policies for Instruction in the Responsible Conduct of Research” as published on the ORI website on December 1, 2000. ORI Director Chris Pascal so informed Rep. Billy Tauzin (R-LA) in a February 14, 2001 letter. Rep. Tauzin is chairman of the House Committee on Energy and Commerce, which has oversight authority over the PHS.



Rep. Billy Tauzin (R-LA)

ASBMB commented extensively (and negatively) on the ORI proposal in a letter to ORI sent on September 19, 2000 (*ASBMB News*, November/December 2000, p. 4). The ASBMB letter itself is available for review on the Society website at:

<http://www.faseb.org/asbmb/RCRComments.htm>

Rep. Tauzin had written a letter to Mr. Pascal on February 5 raising a number of questions about the process by which the ORI policy was developed and promulgated. Specifically, the Tauzin letter noted that the ORI policy “aimed at improving the ethics of those outside government may have been issued by a government agency in apparent disregard of federal law.”

The committee staff analysis indicates that the ORI did not comply with procedures required by at least four federal laws, including the very basic requirement of the Administrative Procedures Act that proposed and final policies that are “substantive rules” be published in the *Federal Register*. Although ORI announced in the *Federal Register* that proposed and final policies on instruction in the responsible conduct of research were being promulgated, the actual policies themselves were both published on the ORI website and not in the *Federal Register*.

The Tauzin letter asked for “all records relating to documents, clearances, or signoffs, including but not limited to memoranda from the Office of the General Counsel, discussing, mentioning or referencing directly or indirectly the propriety or legality of issuing the above noted policy without going through notice-and-comment rulemaking or without adhering to the

provisions of the laws” cited in the letter, and information on “any legal authority that you would rely upon to support the notion that ORI did not violate any of the...laws in issuing” the RCR policy. Rep. Tauzin also indicated that ORI employees might be interviewed as part of the committee review.

In reply, Mr. Pascal noted that education in how to avoid misconduct was a long-standing interest of the federal government, and that therefore the “RCR policy fits into a pre-existing regulatory and policy framework that has been reaffirmed time and again by the research community.” The letter then summarized PHS directives under which ORI was instructed to develop the RCR policy, and indicated that in its view it was not necessary to go through a formal process of rulemaking because the RCR policy “was a natural extension of the pre-existing RCR requirement for NIH training grants.”

Mr. Pascal also indicated that in ORI’s view, “by giving institutions broad discretion to determine how virtually every aspect of the educational program will be implemented, the RCR policy...does not impose the precise standards typically associated with a substantive rule. As a result of the considerable leeway given to the institutions, we believed the RCR initiative was appropriately considered a policy” and not a substantive rule, and thus it was not necessary to publish it in the *Federal Register*.

The letter then summarizes the “extensive efforts” ORI made to provide notice and opportunity to the extramural research community for comment on the draft RCR policy.

However, the ORI letter notes, “Even though we continue to believe that the RCR policy as described above was appropriately issued...we believe that its implementation should be delayed.” ORI has since published a brief notice in the *Federal Register* and on its website announcing that implementation of the RCR policy will be indefinitely suspended pending administration review of all agency rules promulgated in the waning days of the Clinton administration.

Copies of the Tauzin letter, the Pascal letter, the final RCR policy and the proposed RCR policy are available for review on the ORI website, at:

<http://ori.dhhs.gov/html/news/news.asp>

and click on the phrase, “RCR Requirement Suspended” ★

## UPDATE ON PHASE 2 OF THE PANEL ON SCIENTIFIC BOUNDARIES FOR REVIEW REPORT

*(On March 31, we received the following letter and schedule from the NIH Center for Scientific Review, updating the status of NIH's effort to reorganize its many study sections.)*

The Center for Scientific Review (CSR) at the National Institutes of Health (NIH) is continuing the second phase of the initiative recommended by its Panel on Scientific Boundaries for Review (PSBR). (The Panel's phase 1 report can be accessed at <http://www.csr.nih.gov/EVENTS/summary012000.htm>). Phase 2 involves the design of study sections within each of the integrated review groups (IRGs) proposed in the Panel's phase 1 report. A tentative schedule for the implementation of this phase is provided on page 9.

Phase 2 PSBR activities began with a focus on the proposed Hematology IRG. The PSBR report recommended that a Hematology IRG be established to consider applications ranging from basic through clinical studies focusing on blood cells and their diseases as well as studies on the coagulation system and its pathology. Currently, there are two Hematology study sections within the Cardiovascular Sciences IRG, more narrowly focused on both basic and applied aspects of the blood system including blood formation or destruction, leukemogenesis and red cell disorders, transfusion medicine, hemostasis, thrombosis, stem cell transplantation and gene therapy, using cellular, biochemical, immunological, and molecular approaches to normal and pathological processes. Basic applications in this field on clotting, proteases, and vascular biology currently are widely distributed among several other IRGs.

The Hematology Steering Committee comprises NIH CSR review and Institute and Center program staff. This Steering Committee met several times over the past year to identify experts outside of the NIH to serve on the Hematology Study Section Boundaries (SSB) Team and to identify the key scientific areas that might be included in this IRG. Professional societies and organizations involved

in hematological research were asked to nominate experts to serve on this SSB Team as well. The Hematology SSB team convened in February 2001. Dr. Mohandas Narla, from the Lawrence Berkeley National Laboratory at the University of California, served as the Chair of the SSB Team, which included 12 other non-government experts and 5 NIH staff. Dr. Stuart Orkin served as the PSBR representative on this SSB Team.

The SSB Team was charged with designing the study sections in the Hematology IRG, developing referral guidelines for these study sections, and developing the name for the IRG. The SSB Team's report and recommendations have now been posted on the CSR Internet site and are accessible at <http://www.csr.nih.gov/PSBR/IRGComments.htm>. Individuals and professional organizations are encouraged to review and comment on the recommendations. After 90 days, the Hematology Steering Committee will review the comments and summarize these for the CSR Advisory Committee, which will review the final draft guidelines and make recommendations to the CSR Director in Fall 2001. Over the next year or so, CSR will implement the recommendations and establish the new Hematology IRG and its study sections.

Plans for developing the next three proposed IRGs (Muscle, Bone, Connective Tissue, and Skin; Oncological Sciences; and Biology of Development and Aging) are progressing. Steering Committees have been formed and SSB Team meetings will be convened in the next few months. We encourage all investigators to check the CSR homepage at <http://www.csr.nih.gov> periodically, as various areas of specific scientific interest may be included in developing IRGs.

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### FREE MEMBERSHIP FOR NEW PH.Ds!

ASBMB continues to offer a free one-year membership for all newly graduated Ph.Ds. This gives the new Ph.D. a free on-line subscription to the Journal of Biological Chemistry, a free personal subscription to this newsletter, a free subscription to The Scientist, discounts on other ASBMB publications, access to the websites for Science's Next Wave and Science Now, advocacy in Washington DC on public policy issues of interest to the profession, and a host of other benefits.

All members who have graduate students in their labs should submit the names of their new Ph.Ds (upon graduation) to their department chairs. The department chairs should then send their names and addresses to ASBMB, Membership Office, 9650 Rockville Pike, Bethesda, Maryland, 20814.

Give your graduate students a leg up in their career, and sign them up as ASBMB members as soon as they get their diplomas!

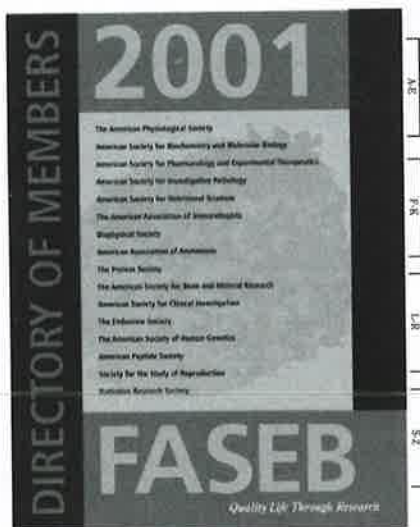


**CENTER FOR SCIENTIFIC REVIEW  
 PANEL ON SCIENTIFIC BOUNDARIES FOR REVIEW REPORT  
 TENTATIVE SCHEDULE FOR PHASE 2  
 March 28, 2001**

<b>PROPOSED INTEGRATED REVIEW GROUPS (IRGs) *</b>	<b>Tentative Start Date**</b>
Hematology	Fall 2000
Muscle, Bone, Connective Tissue and Skin	Winter 2001
Oncological Sciences	Winter 2001
Biology of Development & Aging	Winter 2001
Cardiovascular Sciences	Spring 2001
Surgery, Applied Imaging and Applied Bioengineering	Spring 2001
Fundamental Bioengineering & Technology Development	Spring 2001
Digestive Sciences	Fall 2001
Renal & Urological Sciences	Fall 2001
Immunology Sciences	Fall 2001
Endocrinology, Metabolism and Reproductive Sciences	Winter 2002
Pulmonary Sciences	Winter 2002
Infectious Diseases & Microbiology	Winter 2002
Molecular Approaches to Gene Function	Spring 2002
Fundamental Genetics & Population Biology	Spring 2002
Biological Chemistry & Macromolecular Biophysics	Fall 2002
Cell Function & Interactions	Fall 2002

\* Please note that both the names and the boundaries of some of the proposed IRGs may be modified during phase 2.

\*\* Also, note that this is a tentative schedule for Phase 2. ★



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## In Case You Haven't Heard...

### Good News—Senator Specter Remains Chair of NIH Approps Subcommittee

Senator Arlen Specter (R-Pa.) has decided to retain his chairmanship this Congress of the Senate Appropriations Subcommittee on Labor, Health and Human Services, and Education. Sen. Specter cited his commitment to continue work on the five-year plan to double NIH appropriations and to support federal funding for research on embryonic stem cell research as reasons for his decision to stay. He also noted that the fact that key funding decisions will be made by the subcommittee regarding President Bush's educational proposals and workers' safety programs also factored into his decision. There had been some concern in the life sciences community that Senator Specter would give up his chairmanship to take over as chair of another appropriations subcommittee. Such a move, combined with Rep. John Porter's recent retirement, could have meant a major disruption in continuing congressional support for doubling the NIH budget by 2003.

ASBMB President Bob Wells wrote Senator Specter a letter in January thanking him for his "unwavering support" for NIH in recent years. Dr. Wells noted, "Of course it is not just biomedical researchers who should be thanking you, but rather, the American people as a whole, since in the years to come they will be the beneficiaries of the research you have ensured will be funded....I am certain that the legacy you are building is one that will stand the test of time, to the benefit of all of us." He ended by expressing the hope that Senator Specter "will continue in coming years to be the key figure in biomedical research that you have been in the past."★

### Howard Schachman Honored

ASBMB has instituted a new award to recognize outstanding contributions in the area of public affairs, and announced at the 2001 annual meeting that it will be named the Howard K. Schachman Public Service Award. Dr. Schachman, University of California, Berkeley, served for 12 years (1988-2000) as chairman of the ASBMB's Public Affairs Advisory Committee, and during that time was a key advocate for biomedical science in a variety of legislative and

regulatory battles, from issues involving the responsible conduct of research to proper allocation of the indirect costs of research to attempts to regulate research under the Freedom of Information Act. The new award was announced at a reception given in Dr. Schachman's honor during the 2001 annual meeting.

The American Association for the Advancement of Science also honored Dr. Schachman at its recent annual meeting in San Francisco by awarding him its annual Award for Scientific Freedom and Responsibility.

AAAS cited Dr. Schachman's many years of effort in working for reasonable policies governing the conduct of research. He has "...argued against ambiguous government definitions that suggested practices that deviated from those commonly accepted should be considered misconduct. Instead, policies should include a precise definition of scientific misconduct as fabrication, falsification, and plagiarism. In turn, he argued for appropriate procedures to investigate allegations of misconduct and impose sanctions when guilt was established.

"Dr. Schachman successfully opposed the Public Health Service's ALERT system that prematurely listed individuals under investigation. For his efforts, FASEB honored him in 1994 with its Public Service Award, which is usually given to government officials. Since 1994, Dr. Schachman has served as a special Advisor to the Director of the National Institutes of Health and has acted as the NIH Ombudsman in the Basic Sciences. He routinely counsels American research institutions about alternative funding strategies, reducing bureaucratic burdens, improving the quality of peer review at NIH, and ensuring the integrity of research. This experience has led to his current interest—writing and lecturing on "New Secrecy in Science: Government-Imposed to Self-Imposed."

We at ASBMB who have had the privilege of working with Howard for many years in a variety of capacities—he served as President of both ASBMB and FASEB prior to becoming ASBMB's Public Affairs Advisory Committee Chair, and has received the ASBMB's Merck and Sober awards—congratulate him and wish him many more years of success in his endeavors in both the public policy and scientific realms.★

*continued on page 11*

**In Case You Haven't Heard...** from page 10

## Howard Hughes Medical Institute Unveils Plan for Virginia Research Campus

The Howard Hughes Medical Institute (HHMI) has unveiled a 10-year, \$500 million plan to establish a biomedical science center that will aim to develop advanced technology for biomedical researchers and provide a collaborative setting for a scientific staff that will eventually number more than 200. The campus will be located on a 281-acre site that HHMI recently acquired in northern Virginia. For collaborative activities on the new campus, HHMI will invite proposals from the scientific community at large as well as from HHMI investigators. HHMI will seek proposals with cutting-edge scientific and technological goals that bring together individuals from diverse areas of expertise. HHMI anticipates that the facilities on the new campus will be available for occupancy in approximately four years.

## New FASEB Publications

FASEB's biomedical research funding recommendations for FY 2002 are now available in print or from the FASEB website. For a copy of the booklet, please contact the editor of *ASBMB News* at the address found on page 2 of this newsletter. To view them on the FASEB website, point your browser to:

<http://www.faseb.org/opar/fund2002/fedfund02.pdf>

"Making Anesthesia Safer: Unraveling the Malignant Hyperthermia Puzzle" is the latest (and ninth) article in FASEB's Breakthroughs in Bioscience series. It was written by Marilyn Larach, M.D., F.A.A.P. It provides an overview of the genetics, physiology and biochemistry of a syndrome called malignant hyperthermia (MH), triggered in susceptible individuals by commonly used general anesthetics. The article describes the intriguing path that has led to the discovery and treatment of MH. It illustrates the interaction between researchers in disparate areas of science and the fact that fundamental science can result in discoveries that have important health benefits. Although the specific cause of MH has not been discovered, research in this area suggests that the syndrome involves a general breakdown in the way that the contraction of our muscles is regulated. By studying MH, scientists and physicians have developed a better understanding of muscular regulation, which may allow for the development of new ways to prevent and treat heart attacks.

One can obtain a copy of this article by contacting the FASEB Office of Public Affairs at 301/571-0657, or by going to the *Breakthroughs in Bioscience* website at:

<http://www.faseb.org/opar/break/> ★

## ASBMB MEMBERSHIP NOW OPEN TO UNDERGRADS

The ASBMB has established a new membership category for undergraduates at its Orlando meeting in March 2001. The annual dues for undergraduates is \$20.00. An undergraduate is defined as a student who is working on but has not yet attained a baccalaureate degree in a biomedical science.

Undergraduates who join will receive a free on-line subscription to the *Journal of Biological Chemistry*.

Undergraduates interested in joining should fill out an undergraduate student member application form (available from the ASBMB office), including getting a signature from your mentor attesting to your undergraduate status. The form and a check for \$20.00 (made out to "ASBMB") should then be sent to: ASBMB, Membership Office, 9650 Rockville Pike, Bethesda, Maryland, 20814.

## CONGRESS MOVES TO BOOST NSF FUNDING

Although the National Science Foundation received only a one percent increase in the president's budget outline for FY 2002, there are a variety of steps being taken in Congress to address this problem. First, an effort was launched by Rep. Rush Holt (D-NJ) to amend the budget resolution when it was marked up by the Budget Committee in mid-march. Although the amendment failed, it was not alone—no amendments were accepted, and the President's proposal was basically ratified by the budget committee, and by the full House in early April.

Another effort was launched by Rep. David Wu (D-OR), who drafted a letter to Budget Committee Chairman Jim Nussle (R-IA) calling for a 15 percent increase in NSF funding for FY 2002. He garnered 78 signatures on this letter (most if not all of them from democrats). He sent a similar letter to President Bush, with 95 signatures. Wu's letter said in part:

"It is clear that NSF provides the basic knowledge that leads to the innovation that rejuvenates our economy. Furthermore, university research trains new generations of scientists and engineers. Mr. President, it is important to realize that if funding shortages occur, schools will be required to limit their admissions to graduate programs.

"Due to a lack of funding, NSF currently funds less than a third of its applicants and about half of its quality applicants. Though an applicant may receive a NSF award, it is usually financially sub-optimal. The current situation leaves researchers in NSF funded fields scrambling for funds and spending too much of their time chasing limited funding rather than in the laboratory or mentoring students.

"Again, we request that you give high priority to increasing the NSF's funding by at least 15 percent in your upcoming budget. Funding NSF contributes to the development in the high tech sector. Growth and development in the high-tech sector benefits the economy and continued economic growth benefits all Americans."

Unfortunately, Mr. Wu's letter had no effect on Chairman Nussle, as we noted above.

Rep. Eddie Bernice Johnson (D-TX) has introduced an NSF authorization bill that calls for 15 percent increases for the NSF budget in each of the next four years, resulting in an NSF budget of \$7.7 billion by FY 2005, up from the \$4.4 billion budget in FY 2001. Contrary to her press release on the subject,

however, her proposal does not double the NSF budget as a whole, although certain programs at NSF are doubled.

The major purposes of the proposed budget growth in the bill are to increase the size and duration of NSF research grants; to pursue initiatives in particularly promising research areas (apparently mathematics and in the social and behavioral sciences), and to improve precollege and undergraduate science, math and engineering education. Research spending would rise to almost \$6 billion by FY 2005, and spending on the NSF's Education programs would increase from \$785 million to \$1.374 billion.

This bill would not actually *appropriate* money, however—it would merely allow sums of this magnitude to be spent if they were to be appropriated. The fate of the Johnson bill is unclear at this time.

The problem with the efforts mentioned above to boost NSF is that they have come almost exclusively from democrats—the minority party in the House—and this is almost certain to mean that these efforts will not go very far. However, an effort that seems to have more chance of success has begun in the Senate, where Senators Kit Bond (R-MO) and Barbara Mikulski (D-MD) have reissued a "dear colleague" letter to their fellow senators calling for a doubling of the NSF budget by FY 2005. A dear colleague letter is one sent to all of a Member's fellow senators (or representatives in the case of a House member circulating one) endorsing a particular bill or proposal, and calling for support for it.

Bond and Mikulski's letter calls for doubling the NSF appropriation over a five-year period, which started last year with the almost 15 percent increase NSF received.

Last year, Bond and Mikulski circulated a similar letter and garnered 41 signatures from fellow Senators. While this is a respectable showing, Bond staffers believe it would be extremely useful, given the unfavorable proposed increase NSF has received from the Administration this year, if at least a majority of the Senate were to sign onto this year's version. However, so far, the number of signatories to the current Bond/Mikulski letter has been "disappointing", according to a Bond staffer. As of early April, less than 30 Senators had signed on.

Therefore, contacting your senators to urge that they sign onto the Bond/Mikulski "dear colleague" letter of March 12, would be very helpful for this beleaguered agency.

*continued on page 13*

## NSF Funding *from page 12*

All Senators can be reached at the following mailing address:

The Honorable (name)  
United States Senate  
Washington, DC 20510

If you prefer to telephone, please contact your senator through the Capitol Hill switchboard, at 202/224-3121.

E-mails are also acceptable, although Congress, according to a recent *Washington Post* story, has been flooded with e-mail in recent months (some offices are receiving upwards of 8,000 messages a DAY). Since e-mail from non-constituents is routinely ignored, do not bother to e-mail messages to legislators who do not represent you. E-mail from constituents is taken into consideration, but often goes unread for days or even weeks because of the backlog. ★

*(The following is the Bond/Mikulski letter to Senators Trent Lott [R-MS] and Tom Daschle [D-SD], the Senate majority and democratic leaders, respectively, for which signatures are requested.)*

Senator Trent Lott  
Majority Leader  
S-230 Capitol  
Washington, D.C. 20510

Senator Tom Daschle  
Democratic Leader  
S-221 Capitol  
Washington, D.C. 20510

Dear Majority Leader Lott and Democratic Leader Daschle:

We are writing as longtime supporters of investments in fundamental research and education — the building blocks of the new economy. Just as we have worked collectively to double the National Institutes of Health (NIH) budget over five years, we believe that we must continue a parallel effort to double the budget of the National Science Foundation (NSF) over five years. It is our strong belief that the success of NIH's efforts to cure deadly diseases such as cancer depends heavily on the underpinning research supported by NSF.

*continued on page 15*

## Bush Budget Outline *from page 5*

process and determine what is the right grant size for the myriad types of research the agency funds. These metrics and grant size determinations will be developed in time for consideration of the 2003 budget."

## Setting the Stage for "the Long Term"

And what does the NSF have to say about this less-than-joyful budget proposal? Here is NSF Director Rita Colwell's statement on the proposal, issued on February 28:

"I am pleased that the President has selected the National Science Foundation to lead his Math and Science Partnership Initiative. Investing in people is the first



NSF Director Rita Colwell

goal in NSF's strategic plan, and we have a long-standing commitment to excellence in K-12 math and science education. I look forward to working with the Administration and the Congress on this vital effort.

"I welcomed the strengthened investment in mathematics research, which drives progress in so many science and engineering disciplines. I also enthusiastically welcome the focus on graduate student stipends, which—as I have often said—are long overdue for an increase. The President's priorities clearly mirror our own in these areas.

"The added emphasis on efforts to improve efficiency also addresses longstanding NSF priorities—particularly the need to increase grant size and duration. All of this should set the stage for strong and sustained investments in research and education over the long term." ★



COMING IN  
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## Molecular and Cellular Proteomics

will have an emphasis placed on determining how the presence or absence of proteins affects biological responses and how the interaction of proteins with relevant cellular partners allows them to function. Articles utilizing or advancing protein identification technology — such as multi-dimensional electrophoresis and/or mass spectrometry — protein and nucleic acid arrays, and computational assessments will be particularly appropriate. The journal encourages the submission of substantive supporting data sets (which will appear *en toto* in the electronic version) and will feature interactions (hyperlinks) with germane databases.

- **Electronic Manuscript Submissions** — Manuscript submission, review, and initial appearance will all be accomplished electronically (the e-version will be published as a member of the HighWire consortium).
- **Immediate Publication** — All papers accepted for publication will appear immediately in the electronic version including all supplemental material.
- **Printed Monthly** — The print version will appear on a monthly basis (without supplemental information).
- **Editorial Board** — The full composition of the editorial board will be announced in early 2001. It is anticipated that the electronic version will be available for submissions on June 1, 2001.

## Bond/Mikulski letter from page 9

The NSF supports fundamental research that contributes to the nation's health and well-being. In the fiscal year 2001 appropriation, the Congress provided this crucial agency with the largest budget increase in its history, which put the agency on the path of doubling its budget in five years. As the Council on Competitiveness has noted: "For the past 50 years, most, if not all, of the technological advances have been directly or indirectly linked to improvements in fundamental understanding." *Business Week* adds: "What's needed is a serious stimulant to basic research, which has been lagging in recent years. Without continued gains in education and training and new innovations and scientific findings the raw materials of growth in the New Economy — the technological dynamic will stall."

NSF's impact over the past half century has been monumental — especially in the field of medical technologies and research. The investments have also spawned not only new products, but also entire industries, such as biotechnology, Internet providers, E-commerce, and geographic information systems. Medical technologies such as magnetic resonance imaging, ultrasound, digital mammography and genomic mapping could not have occurred, and cannot now improve to the next level of proficiency, without underlying knowledge from NSF-supported work in biology, physics, chemistry, mathematics, engineering, and computer sciences. In 1993 support made it possible to detect the cause of a deadly hantavirus outbreak in the American Southwest. NSF-supported research on plants led to the discovery of Taxol, a derivative of Yew trees that is effective against certain cancers. The benefits of NSF research to medical science and technology has been recognized by leading doctors such as the former heads of the NIH, Harold Varmus and Bernadine Healy, and the President of the Institute of Medicine, Kenneth Shine.

New NSF support for research in nanotechnology, high-speed computing, plant genome research, biocomplexity, and cognitive neuroscience will further advance the state of technological change and improve our quality of life through creation of new products, a better understanding of how humans behave, and how our ecological systems can survive. Furthermore, every generation requires a group of skilled and innovative scientists and engineers to make the new discoveries that propel society into the future. NSF's educational programs from pre-kindergarten to graduate school train the next generation of inventors and discoverers. For industry, this is the best type of technology transfer.

Lastly, NSF programs have become important resources for broadening the participation of under-represented groups such as minorities and women in the fields of science, math, and engineering. Further, NSF programs such as the Experimental Program to Stimulate Competitive Research (EPSCoR) and the Innovation Partnerships program have become critical resources for strengthening the research and development infrastructure of many rural and small states.

Senators may disagree about the precise mix of fiscal and monetary policies that will ensure a continuation of America's current economic prosperity. But there is a growing consensus that investing in fundamental scientific research is one of the best things we can do to keep our nation economically strong. This fact has been recognized by Federal Reserve Chairman Alan Greenspan, NASDAQ President Alfred Berkeley, the Committee for Economic Development, and many other widely respected experts. For all these reasons, we hope you will join us in continuing a five-year goal of doubling the budget of the National Science Foundation by fiscal year 2005.

Sincerely,

Christopher S. "Kit" Bond  
U.S. Senator

Barbara A. Mikulski  
U.S. Senator ★

## Upcoming Scientific Meetings

### **NIGMS Annual Biomedical Research Conference for Minority Students**

Orlando, FL  
October 31 - November 3, 2001  
WWW: <http://www.abrcms.org/>

### **The Cytokine Odyssey A Joint Meeting of ICS (The International Cytokine Society) and SLB (Society for Leukocyte Biology)**

November 8-11, 2001  
Maui, Hawaii  
Contact: Sherwood Reichard  
Tel: 706 722-7511  
Email: [maps@csranet.com](mailto:maps@csranet.com)  
WWW (ICS): <http://bioinformatics.weizmann.ac.il/cytokine>  
WWW (SLB): <http://www.biosci.ohio-state.edu/~slb>

### **Protein Society 15th Annual Symposium**

July 28 - August 1, 2001  
Philadelphia, PA  
Contact: Protein Society Meetings Office  
Ph: 3021/530-7010  
Fx: 301/530-7014  
Email: [prot01mtg@faseb.org](mailto:prot01mtg@faseb.org)  
WWW: [www.faseb.org/meetings/protein01](http://www.faseb.org/meetings/protein01)

### **Annual Meeting Ecological Society of America**

Madison, Wisconsin  
August 6-10, 2001  
Contact: A. Gillespie  
Ph: 202/833-8773, x211  
Email: [alison@esa.org](mailto:alison@esa.org)

### **23rd Annual Meeting American Society for Bone and Mineral Research**

October 12-16, 2001  
Phoenix, Arizona  
Contact: Business Office  
Ph: 202/367-1161  
Fx: 202/367-2161  
E-mail: [ASBMR@dc.sba.com](mailto:ASBMR@dc.sba.com)



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