

## Experimental Biology 2002

### Call for Papers!

**Abstract Deadline  
November 7, 2001**



The Call for Papers for the Experimental Biology Meeting was mailed in September to all ASBMB Members.

The meeting will be held April 20-24 in New Orleans, Louisiana. **Please note, the deadline for abstract submission is November 7, 2001.** Travel funds are available for the meeting (see page 16). We hope you will apply or encourage your students or colleagues to submit applications.

Please contact the Society office should you need additional copies.

If you have not received the Call for Papers or require additional meeting information visit:  
[www.faseb.org/meetings/eb2002](http://www.faseb.org/meetings/eb2002).

## Stem Cell Decision Seen as One Step Forward

**P**resident Bush's decision to allow limited research on stem cells with federal funds, announced August 9 in a nationally televised address, has provoked comment both pro and con, but for the most part he is getting credit for deftly walking the political tightrope surrounding this controversial manifestation of modern biology.

The comments do not fall along party or political lines, with supporters and opponents from all along the political and social spectrum voicing their opinions. Most surprising is the considerable support the President is receiving from the conservative wing of his own party, with such staunch conservatives as Senators Kay Bailey Hutchison (R-TX) and Orrin Hatch (R-UT) voicing their support.

The President's decision allows federal funds to be used for research on already-existing stem cell lines, of which he said that there are about 60. But federal funds cannot be used in research that would result in the destruction of additional human embryos. This renders off limits to federally-funded researchers the estimated 100,000 "surplus" embryos currently languishing in cold storage in various IVF clinics around the country. The president also announced the establishment of a new advisory board on stem cell research.

NIH Acting Director Ruth Kirschstein released the following statement after the President's address:

"We are pleased with the President's decision to allow the use of Federal funds for important basic research on human embryonic stem cells. The

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## ASBMB News

is a monthly publication of

### The American Society for Biochemistry and Molecular Biology

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#### Comments

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or questions concerning *ASBMB  
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## We Get Letters . . .

### A Disservice to Science

Thank you for your cogent article "Senate Passes Elementary and Secondary Education Act Including Amendment with Creationist Origins."

These ongoing attempts to cloak a religious belief in the language of scientific debate do a disservice to both science and religion. An attack on the use of logic and experiment in any area of science is an attack on all of science, and it is no accident that the Kansas School Board voted that such topics as the expanding Universe and the Big Bang also be removed from the proposed Science Education standards.

The American Association for the Advancement of Science and the American Institute of Biological Sciences have established email lists in each state to promote and defend the teaching of biological evolution. There are additional initiatives for individual scientific societies to jointly acknowledge the central role that the process of Darwinian evolution plays in all aspects of Biology. It is high time for ASBMB to join these efforts.

Francis J. Schmidt

Professor of Biochemistry

University of Missouri-Columbia

(See article on page 17.)

### PAY YOUR DUES ONLINE

ASBMB dues notices have been mailed to all members, and you now can make payment utilizing our new website by following the membership link at [www.asbmb.org](http://www.asbmb.org).

And don't forget, your membership now includes the benefit of a free subscription to the on-line version of ASBMB's new journal, *Molecular and Cellular Proteomics*.

Also, we've been contacted by Annual Reviews and you can once again order your 2002 edition of the *Annual Review of Biochemistry* through ASBMB.

We appreciate receiving letters that are suitable for publication from ASBMB members regarding issues of importance or commenting on articles appearing in *ASBMB News*. Letters should be sent to the editor, John Thompson. Letters must be signed and contain the writer's address and telephone number. The editor reserves the right to edit all letters.

# State of Our Society At Mid-Term

By Robert D. Wells, President



I am pleased to convey an overview of the state of our Society from my vantage point at the mid-term of my two-year Presidency (July 1, 2000 - June 30, 2002).

The spirit of your American Society for Biochemistry and Molecular Biology is excellent. With more than 10,000 total

members, I have found a wonderful enthusiasm by you for participation on a variety of functions of our organization. The *Journal of Biological Chemistry* is thriving, the Society is financially healthy, and a number of new initiatives have been implemented.

Two retreats were held in May and September of 2000 in Chantilly, VA to address the status of our Society and its future. Virtually all facets of our committee structure and other organizational issues were reviewed. Herein, I wish to focus on three new initiatives. First, a new journal, *Molecular and Cellular Proteomics*, has been brought into place and was described in the last three issues of *ASBMB News*. Drs. Ralph Bradshaw and Al Burlingame, as Editor and Deputy Editor, respectively, inform me that papers are currently being accepted on-line and six excellent Associate Editors and over 60 members of the Editorial Board have been named. Five types of manuscripts will be published including the following: regular research papers, technology papers, databases, short reviews, and perspective articles.

Second, our publication activities have been broadened substantially by our agreement with the International Union of Biochemistry and Molecular Biology (IUBMB) to co-manage *Biochemistry and Molecular Biology Education* (BAMBED) with Drs. Donald and Judy Voet as the new Co-Editors, co-publication of the *Journal of Lipid Research*, and an expanded and broadened *ASBMB News*. Third, our Public Affairs Advisory Committee has been revitalized and restructured under the leadership of Dr. William R. Brinkley.

## Strengths

A substantial component of our strength is our history, dating back to 1906, with a distinguished and innovative membership with excellent leaders. Our

pre-eminent journal, *Journal of Biological Chemistry*, dates to 1905. Thus, *Molecular and Cellular Proteomics* (MCP) is the first new journal initiated by our Society in the past 96 years! A third component of our strength is our sound financial base which is administered by Dr. Kenneth Neet and his dedicated Finance Committee. Fourth, I wish to acknowledge the diligent and effective executives in our Bethesda National Office, Charles Hancock, Barbara Gordon, Peter Farnham, Kathie Cullins, and Kelly Gull.

## Diverse Programs

The fundamental nature of our Society requires diverse programs. Only a few will be mentioned to give the membership a taste of our interests. First, the National ASBMB Meeting will be held jointly with Experimental Biology on April 20-24, 2002, in New Orleans. Drs. Ralph A. Bradshaw and Joan W. Conaway are the meeting organizers and an excellent program has been established with emphasis on cellular control, gene regulation, proteomics, and four focus sessions. Second, the Educational and Professional Development Committee (Dr. Marion O'Leary, Chair) activities have been strengthened with involvement of graduate students and post-doctoral programs. Third, the Minority Affairs Committee is now chaired by Dr. Phillip Ortiz and we can expect new initiatives in this area. Fourth, a bylaw change was implemented by Dr. Richard Hanson (Past President) making the Presidency a two-year term. This creates a continuity which is beneficial for the Society. Fifth, Dr. Bettie Sue Masters (President Elect) chairs the Centennial Observance Committee which is organizing our 2005 Celebration. A breakfast meeting of past presidents was held in 2001 in Orlando. Sixth, Dr. Charles Radding (Yale University) has accepted the responsibility of representing our Society on the Board of the American Type Culture Collection.

## Inter-Society Relations

I believe that the ASBMB enjoys an excellent interface with the Federation of American Societies for Experimental Biology. As you know, FASEB is comprised of 21 Societies with more than 60,000 members, making it the largest coalition of biomedical research associations in the U.S. Your representatives (Bettie Sue Masters and me) hold positions on the Board of Directors.

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## President OK's Stem Cell Research . . . from page 1

approach he has outlined is sound, and we understand the President's clear desire to move forward with care. Using the more than 60 existing cell lines from around the world, many more researchers will now be able to explore the potential of human embryonic stem cells, in addition to the extensive work already sponsored by NIH using human adult stem cells. We believe this combined research has high potential both for opening new doors in basic scientific understanding and for discovery of new treatments for some of our most devastating diseases."

According to media reports, the assertion that there are more than 60 stem cell lines already in existence has been questioned, with some commentators and scientists saying they are aware of less than 10 such lines. The larger number, according to the *Washington Post*, was provided by NIH, which looked into this question at the behest of the White House. The larger total includes lines that exist in labs around the world, not just in the United States.

The discrepancy surrounding the actual number of lines available has become the focal point of criticism from those who wanted the President to go even farther than he did. On August 27, NIH released an "update" on the question and revealed that by its count, the 64 lines are broken down by country as follows:

United States:	20 (among 4 institutions)
Sweden:	24 (among 2 institutions)
Australia:	6 (at 1 institution)
India:	10 (among 2 institutions)
Israel:	4 (at 1 institution)
TOTAL:	64

However, many of the institutions contacted by the press and others after NIH's announcement said that the lines cited in the report had for the most part not been proven viable or robust enough to conduct stem cell research at this time. The report is available on the NIH website, at <http://www.nih.gov/news/stemcell/082701list.htm>

***"It doesn't go far enough to fulfill the life-saving potential of this promising new medical research."***

***Senator Kennedy***

In fact, HHS Secretary Tommy Thompson testified at a hearing before the Senate Committee on Health, Education, Labor and Pensions (HELP) on September 4, that of the 64 stem cell lines NIH cited, in fact only about two dozen of them actually are viable. However, Secretary Thompson also announced that the WiCell Research Institute, which also holds key patents on the stem cell process, has agreed to make the five stem cell lines it owns available to researchers at modest cost (\$5,000), and the researchers will be able to freely publish research results. NIH can also keep the intellectual property that results from the research. Thompson also said that NIH would begin accepting stem cell research applications after October 1, and that money would be available eight to nine months after that. HELP Committee Chair Edward Kennedy (D-MA) plans to conduct additional hearings in the next couple of weeks on the stem cell issue.

## ASBMB Statement on Stem Cell Research

ASBMB President Robert Wells issued the following statement regarding President Bush's decision to allow federal funding for limited stem cell research.

"I am pleased to learn that President George W. Bush has decided that federal funds may be used to support innovative research on human embryonic stem cells. I believe that the majority of the members of the American Society for Biochemistry and Molecular Biology believe that this area of critical research should be advanced at the earliest possible time. Whereas extensive work is already sponsored by NIH using human adult stem cells, this decision enables the use of the 60 or more existing cell lines for exploration of the potential of human embryonic stem cells.

"The establishment of a new Council to ensure that embryonic stem cell research is explored under appropriate federal guidelines is encouraging. Unfortunately, he placed certain restrictions on this funding; in my opinion, this will hamper our progress and slow the potential benefits to patients and their families who are suffering from debilitating diseases. However, in summary, I believe that the ASBMB can live with his decision and I commend him for his fortitude."

In spite of these caveats, most scientists seem to be taking a wait-and-see approach because the decision could have been a lot worse—many were afraid that the President would put off limits for federal funding any stem cell research at all (see the box on page 4 for ASBMB President Bob Wells' statement issued in the wake of the President's decision). Now, however, at least some research will be allowed to go forward, in tandem with about \$250 million in research already being funded on stem cells derived from human adult cells, from placentas, from umbilical cords, and from animal tissues.

FASEB President Bob Rich said in a statement that "We are pleased that the President has decided that human embryonic stem cell research will be allowed to proceed with federal support and oversight, if only in a limited way." The real issue now, said Dr. Rich, will be to look at the 60 or so embryo lines and determine their suitability and genetic diversity for the breadth of scientific work that is ready to go forward. "If we find more cell lines are needed then we can make our case. The great news is that we can begin federally funded stem cell research and the President is to be applauded for making the courageous decision to proceed. If there are scientific issues with the limited cell lines, we will discover them through the research process."

Congressional reaction to the decision has been generally favorable so far. Few members criticized it outright, and many characterized it as a step in the right direction, although not going far enough. Typical was the statement issued by Senator Kennedy, who called the decision "an important step forward, but (it) doesn't go far enough to fulfill the life-saving potential of this promising new medical research. Restrictions on this life-saving research will slow the development of the

new cures that are so urgently needed by millions of patients across America. I'm optimistic that Congress will enact the legislation needed to enable this research to move forward, with proper ethical and scientific oversight."

Senator Tom Harkin (D-IA), chairman of the Senate Appropriations Subcommittee on Labor/HHS/Education, which funds NIH, said:

"I'm glad that the President has decided to permit and encourage our medical scientists to do stem cell research.

"As the Chairman of the Senate subcommittee that funds all medical research, I want to work with the President and members of Congress to move this research forward in a robust, but ethical manner. We must also consult with our top scientists to make sure we have an adequate number of stem cell lines to allow this research to reach its fullest potential.

"Stem cells hold so much promise for curing illnesses like diabetes, Alzheimer's, Parkinson's and spinal cord injuries that we cannot afford to wait any longer."

Senator Kay Bailey-Hutchison (R-TX) said immediately after the speech that the President's decision is a "step in the right direction."

A CNN/USA Today/Gallup poll, conducted immediately after completion of the speech, found that overall, 50% of Americans said they approve of Bush's decision, and 25% disapprove (including 7% who said the limits are too strict, 13% who want stricter limits, and 5% who are unsure). Another 25% neither approve nor disapprove. For more polling data on the decision, see the accompanying story on page 7. ☼

## State of Our Society . . . from page 3

Second, our Society has very positive interfaces with our international affiliate, the International Union of Biochemistry and Molecular Biology. This relationship has only been strengthened recently with the co-publication of *Biochemistry and Molecular Biology Education* and we are planning for the 2004 Joint Meeting with the IUBMB in Boston, MA. Third, the U.S. National Committee to the IUBMB is planning a Workshop on Proteomics on February 25, 2002, in Washington, D.C.

### Summary

In summary, your Society is vibrant and strives to serve its entire membership. Please feel free to correspond with me concerning topics which may be on your mind. We solicit and need your involvement. Please encourage your colleagues, students and postdocs to join your Society. Thank you for your enthusiastic participation. ☼

# **Pros and Cons Span the Spectrum**

**By John D. Thompson**  
**Editor, ASBMB News**

**P**resident Bush's pronouncement on stem cell research has, not surprisingly, sparked a torrent of pros and cons from all across the spectrum: ethical, political, religious, and scientific.

And despite what a stunned Richard Doerflinger, spokesman for the U.S. Conference of Catholic Bishops and the its point man on abortion issues, told CNN in the wake of President Bush's decision on stem-cell research, "I seem to be the only man in America who is against the President's policy," there seem to be as many speaking against as for.

And some of those for the President's position come as a surprise to those against. "I find their positions difficult to square with the fundamental principle that human life is precious and ought to be preserved," said Kenneth L. Connor, President of the Family Research Council, of abortion foes who praised the Bush's decision.

Still, the National Right to Life Committee, the largest anti-abortion group, announced that it was "delighted" by Mr. Bush's speech. So did the Rev. Jerry Falwell, the founder of the Moral Majority, a conservative religious group, and Dr. James C. Dobson, the President and founder of Focus on the Family, a ministry based in Colorado.

Pat Robertson, founder of the Christian Coalition, proclaimed the President's compromise "an elegant

solution to the thorny issue of stem research by firmly protecting the rights of the unborn."

Syndicated columnist George Will, on the other hand, praised Bush for not trying to split "the unsplitable difference about the use, including the production, of embryos—unquestionably living entities, unquestionably of the human species—as resources for research," and approving the use of stem cells for research used only "where the life-and-death decision has already been made."

"Bush's decision," concluded Will, "is that such destructions are wrong, but that it is acceptable to seek benefits from the 60 or so 'lines' of stem cells that have resulted from such wrongs. Is this coherent? It is if you hold, reasonably, that one can materially participate in a wrong by accepting a benefit from it if, but only if, three conditions obtain: One must not cooperate with the wrong, one must not enable the wrong, and one must not provide inducements for the wrong."

## **Compromise or Solution?**

Bush's decision has been characterized as a "compromise." However, Leon Kass, the scientist and philosopher named by the President to head a commission on biomedical ethics, believes that "solution" is a more appropriate description.

*Continued on page 7.*

## **Back Issues of JBC Now Online**

Prior to July 2001, the online version of the *Journal of Biological Chemistry* was limited to abstracts, full text, and PDFs for the years 1995 through the present, and only abstracts of articles from the years 1980-94. In 2000, the ASBMB Council recognized that there would be great value if the complete text, rather than just abstracts, of the articles which appeared in 1980-94 could be online. The Council appropriated about \$300,000 to scan the papers from this period. The scanning has now been completed, and over 20 years of the *JBC* is now online in abstract and PDF form.

It should be noted that this project was initiated with no hope of recouping the sizable expenditure of funds. It was felt by the Publications Committee, Finance Committee, and Council that 20 years of *JBC* forms a significant portion of the citable literature and should be available barrier-free to the scientific community at no cost, as a public service.

In his column, Will quoted Kass as saying, "Because we belong to the nature we study and seek to control, our power over nature eventually means power also over ourselves. We are not only agents but also and increasingly *patients* of our scientific project for the mastery of nature. Our self-conception, if not also our very being, lies upon the table science—biology, medicine, psychology—has prepared. How shall we treat this patient? What standards of health and human flourishing shall guide our self-manipulations?"

*Washington Post* columnist Richard Cohen had a somewhat different take. "Life," he wrote, "requires progressing from the embryo stage to the fetus stage,

and maybe then some. But if the process is interrupted, which is more the rule than the exception in nature, then we do not have life. We had merely the potential for it."

Cohen predicts that ultimately, stem cell research and cloning are going to produce ethical questions galore. "But the one that exists at the moment" he wrote, "is entirely manufactured—the product of calling an embryo a 'human being.' Only by doing that do you get a dilemma, a supposed tradeoff between the 'human being' residing in a Petri dish that's the embryo and the 'human being' that's an actual human being." ❁

### **STEM CELL RESEARCH AND PUBLIC OPINION POLLS:**

## ***It's All in the Wording of the Questions***

In the past few weeks, politicians and interest groups both pro and con have brandished polls to prove conclusively that the public either backs or opposes federal funding of human embryonic stem cell research. For example, an NBC News/ *Wall Street Journal* poll found 69% in favor of federal funding for stem cell research, while a survey done for the Conference of Catholic Bishops found only 24% in favor.

How can there be such a difference? Look at the wording of the questions.

The NBC/Journal poll referred to stem cell research as involving "potentially viable human embryos," while on the other hand, the bishops' poll included this line, "the live embryos would be destroyed in their first week of development."

According to professional pollsters, large variations in polls can generally be traced to how the poll questions were worded, particularly when the respondents lack knowledge or have no firm opinions on the subject.

Whatever their language, all the polls on stem cell research asked long, involved questions. And that is a tip-off that the issue is remote from most people, according to Bernard Roshco, a former editor of *Public Opinion Quarterly*. "Americans are acquiescent so they'll give you an answer," he explained in a recent interview with the *New York Times*, "but the mere fact that you've got to offer a lengthy summary implies that it's too early to sort it out." ❁

## **NIH Eases Grant Deadlines In Wake of Terrorist Attacks**

In the wake of the horrific terrorist attacks on New York City's Twin Trade Towers and the Pentagon, NIH issued the following announcement:

"The tragic events of September 11 will have many effects on operations at universities and research institutions, as well as the NIH. The NIH realizes that this may cause problems for investigators who are planning to submit grant applications. Applications that are submitted late should include a cover letter noting the reasons for the delay. It is not necessary to get permission in advance for such delays in grant application submission. For most applicants a

reasonable delay will be until normal communication and delivery processes are functioning. For applicants in New York City, it is expected that the delays may be considerably longer. Since there are still many uncertainties at this time, it is difficult to give further guidance. As more information becomes available, additional notices will be posted in the NIH Guide for Grants and Contracts.

"Individuals who were scheduled to come to NIH for review or other meetings should check with the Scientific Review Administrator or responsible Federal official about any changes." ❁

# NAS Workshop on Human Cloning Reveals Pitfalls and Procedure

By Peter Farnham, CAE  
Public Affairs Officer

**E**xperimental efforts to clone human beings will inevitably lead to large numbers of miscarriages and infant deaths, and a wide variety of birth defects among most of the few cloned babies who survive. This was the overwhelming but not total consensus of the participants in an August 7 workshop at the National Academy of Sciences on "Scientific and Medical Aspects of Human Cloning." The day-long meeting, which attracted intense media coverage, featured many of the world's leading experts on cloning.

By the end of the day the attendees—who along with the media packed the main lecture hall in the Academy's august headquarters on Constitution Avenue in Washington, DC—were very well informed about the scientific and ethical aspects of this emerging and controversial technology. Virtually all the panelists made it clear that it is far too early to be attempting to clone humans for reproductive purposes. Several participants went so far as to say that human reproductive cloning ought to be banned not only now, but forever.

The major reason, for not proceeding full speed ahead with human cloning, that emerged from the workshop was the extremely low success rate in animal cloning. Only a tiny fraction—in many cases less than one or two percent—of blastocysts that are created and then implanted ever survive to live birth, and many of the survivors die shortly thereafter. In addition, many of the clones that do survive have birth defects, either gross or subtle.

Dr. Ian Wilmut, the scientist who cloned "Dolly," the Scottish sheep, told of a newborn lamb at his research facility who appeared normal, ate and was gaining weight, but who panted and hyperventilated constantly, even when at rest. After 12 days of effort to correct the problem, Dr. Wilmut's staff decided it was more humane to euthanize the animal than allow it to live its life gasping for breath.

The autopsy revealed that air passages in the lamb's lungs were so narrow that it was physiologically incapable of obtaining enough air even in a resting state to be able to breath normally. Dr. Wilmut noted that while euthanasia was sadly necessary and permissible in this case, this would not be an option in a cloned child unfortunate enough to be born with this

or some other serious defect. He summed up by noting bluntly that if one extrapolated from animal cloning experience, attempts at human cloning would result in large numbers of miscarriages, infant deaths, and birth defects, and that this was inherently immoral.

The wealth of scientific information presented at the workshop was overshadowed by frenzied media interest in several of the attendees. The subjects of most of the press attention were Dr. Severino Antinori (University of Rome, Italy), Dr. Panayiotis Michael Zavos (Kentucky Center for Reproductive Medicine and IVF, and President and CEO of ZDL, Inc.), and Dr. Brigitte Boisselier (Scientific Director of a firm called Clonaid, which bills itself as "the first human cloning company"). Every time a break was announced, the international media rushed the stage to interview these three people.

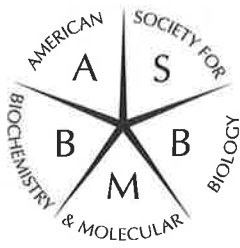
Dr. Antinori is the reproductive physiopathologist who successfully brought about a pregnancy and birth in a 62-year old woman in Italy in the early 1990s. He is known as "Doctor Miracle" in Italy. He expressed his clear intention to try to clone a child for the benefit of parents who cannot conceive normally, but did indicate that he would not accept applications for his services from couples who wanted to replace a deceased child.

Dr. Zavos announced at the meeting that he intends to try to clone a human (and said during the workshop that he expected to begin on this within 30-60 days). He seemed to view the whole workshop as the leading edge of a vast conspiracy. He noted that a recent paper in *Science* (published by another workshop participant) that discussed the pitfalls associated with cloning appeared two weeks before the House of Representatives approved an anti-cloning bill. He then devoted time in his formal presentation to pointing out the differences in time to publication between this paper and others, with the implication that *Science* published the anti-cloning paper quicker than usual in an effort to influence the House vote.

Dr. Boisselier, a holder of Ph.Ds in Physical and Analytical Chemistry, is a "bishop" in a cult known as the Raelians who believe that humans are clones placed on Earth by aliens. Dr. Boisselier staunchly defended human cloning during her presentation, saying that she had no ethical problems with the

*Continued on page 16.*





Satellite Meeting  
Deadline for Abstracts  
November 7

## ASBMB Satellite Meetings April 19-20, 2002 Sheraton New Orleans, Louisiana

### Satellite I - Transcriptional Regulatory Mechanisms

Organized by Ronald C. Conaway, *Stowers Inst. for Med. Res., Kansas City, MO*, Joan W. Conaway, *Stowers Inst. for Med. Res., Kansas City, MO*, and Ali Shilatifard, *Saint Louis University*

#### Keynote Lecturers

Robert G. Roeder      Richard Losick

#### Symposia

##### Activation

\*Barbara J. Graves, Peggy Farnham, Robert Schleif,  
Dale Dorsett

##### Chromatin

\*Sharon Y.R. Dent, Karolin Luger, Ed Seto

##### Repression Mechanisms

\*Ronald C. Conaway, Elke Krueger, Don Ayer

##### Fundamental Mechanisms

\*Ali Shilatifard, Jean-Marc Egly, Robert Landick

### Satellite II - Scientific and Technical Challenges in the Human Proteome

Organized by Al Burlingame, *UCSF* and John T. Stults, *Genentech, Inc.*

#### Keynote Lecturers

Ruedi Aebersold      Leigh Anderson

#### Symposia

##### Cellular and Subcellular Fractionation in Scientific and Technical Challenges of the Human Proteome

\*John J. M. Bergeron

##### Proteomic Approaches to Protein Modifications

\*Al Burlingame

##### Protein Separation and Quantitation in Proteomics

\*John T. Stults

##### Proteomics on Scale: Translating Capacity into Knowledge

\*Steven A. Carr, Marc Vidal, Scott Patterson

### Satellite III - Combinatorial Signaling

Organized by Ralph A. Bradshaw, *UC, Irvine* and Sarah J. Parsons, *Univ. of Virginia Hlth. Sci. Ctr.*

#### Keynote Lecturers

Ralph A. Bradshaw      Natalie G. Ahn

#### Symposia

##### Receptor Crosstalk

\*Sarah J. Parsons, Corinne M. Silva,  
Louis Lattrell

##### Receptor Oligomerization

\*Steve Hubbard, Melissa Starovasnik,  
Moosa Mohammadi

##### Growth Factor/Integrin Signaling

\*John T. Parsons, Alan Wells, Michael Schaller

##### Non-Genomic Steroid Signaling

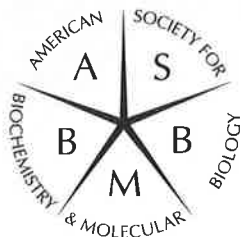
\*Margaret A. Shupnik, Kathryn Horwitz,  
Stavros Manolaga

#### Abstract Deadline—November 7, 2001

Abstracts submitted to ASBMB Satellite Meeting topic categories will be displayed Friday and Saturday, the 19th and 20th in the Sheraton New Orleans from 8:00 AM - 5:00 PM. Posters presented in the Satellite Meetings will not be presented within the Experimental Biology 2002 Meeting, April 20 - 24, 2002.

For information contact: ASBMB Meeting Office, 9650 Rockville Pike, Bethesda, MD 20814  
Tel: 301-530-7145; Fax: 301-571-1824; www.asbmb.org

(\*denotes Chairperson)



**ASBMB Annual Meeting**  
**In Conjunction with Experimental Biology 2002**  
**April 20-24, 2002 • New Orleans, Louisiana**

Organized by the ASBMB Program Committee  
Chairs: Ralph A. Bradshaw, UC, Irvine and  
Joan W. Conaway, Stowers Inst. for Med. Res., Kansas City, MO

**ASBMB OPENING LECTURE**

The Eukaryotic Gene Transcription Machinery  
Roger Kornberg, *Stanford Univ.*

**AWARD LECTURES**

ASBMB-Merck Award: Roger Kornberg and Robert  
Roeder  
ASBMB-Amgen Award: Joseph Heitman,  
ASBMB-Avanti Award in Lipids: Christian R.H. Raetz

ASBMB-Schering-Plough Research Institute Award:  
John D. York  
Herbert A. Sober Lectureship: Jack D. Griffith  
William C. Rose Award: Gordon Hammes.

**THEME I: Cellular Control**

Plenary Lecturers

Lipid Rafts in Membrane Trafficking  
Kai Simons, *Max Planck Inst., Dresden*

Apoptosis Mechanisms: A Genomics Perspective  
John Reed, *Burnham Inst.*

Title TBD  
Brian U. Druker, *Oregon Hlth. Sci. Univ.*

Symposia

**Role of Mitochondria in Apoptosis**  
\*Douglas Green, Craig B. Thompson, Richard J. Youle

**Cell Cycle M-phase Control**  
\*J. Wade Harper

**Control of Cholesterol Homeostasis**  
(In memory of Konrad Bloch)  
\*Dennis Vance, Michael Brown, Joseph Goldstein

**Combinatorial Signaling Satellite Highlight Symposium**  
\*Sarah J. Parsons, John T. Parsons, Stevan Hubbard,  
Margaret A. Shupnik

**Endoplasmic Reticulum Stress Response**  
\*Randal J. Kaufman, Dave Ron

**THEME II: Gene Regulation**

Plenary Lectures

Multiprotein Complexes that Regulate Transcription by  
Modifying Chromatin  
Jerry L. Workman, *HHMI, Penn State Univ.*

Protein Sorting at the ER Membrane  
Arthur E. Johnson, *Texas A&M University Health Sci. Ctr.*

Symposia

**Signaling to the Nucleus and Beyond**  
\*Barbara J. Graves, Eric Olson, Carol Prives

**Shuttling To and From the Nucleus**  
\*Douglass J. Forbes, Michael F. Rexach, Mary S. Moore

**Chromatin Remodeling Machines**  
\*Sharon Y.R. Dent, Brad Cairns, Craig L. Peterson

**Protein Trafficking at Membranes**  
\*Robert E. Jensen, Rosemary Stuart, Colin Robinson,  
Steven M. Theg

**THEME III: Proteomics**

Plenary Lectures

Issues in the Inference of Protein Function Using  
Bioinformatics Approaches  
Patricia C. Babbitt, *UCSF*

Symposia

**Protein Machines**  
\*Jyoti Choudhary  
**Chemically Reactive Probes for Proteomics and  
Drug Discovery**  
\*James A. Wells, Matt Bogoy, Ruedi Aebersold

**Protein Dynamics & Function**  
\*Arthur G. Palmer, III, A. Joshua Wand,  
Ann E. McDermott

**Evolution of Function in  $(\beta/\alpha)_8$ -Barrels**  
\*John A. Gerlt, Frank Raushel, Reinhard Sterner

## FOCUS GROUP SESSIONS

### Regulation of Development and Immunity by Glycoconjugates

Organized by the ASBMB Glycobiology Focus Group

\*John Lowe, Carlos B. Hirschberg

### Lipid Traffic and Enzymology in Membrane Assembly

Organized by the ASBMB Lipids and Membranes Focus Group

\*Dennis R. Voelker, Masahiro Nishijima

### Animal Models for the Study of Metabolic Processes

Organized by the ASBMB Metabolic Regulation Focus Group

\*Richard W. Hanson, Domenico Accili, Mulchand S. Patel

### Enzyme Structure, Function and Mechanism

Organized by the ASBMB Enzyme Structure, Function and Mechanism Focus Group

\*Vern Schramm, JoAnne Stubbe, Daniel Herschlag

## EDUCATION AND PROFESSIONAL DEVELOPMENT SYMPOSIA AND ACTIVITIES

### Teaching Biochemistry I — New Methods

\*J. Ellis Bell, \*Christopher E. Rohlman, Jan Serie, Fred Rudolph

### Teaching Biochemistry II — New Content

\*J. Ellis Bell, \*Christopher E. Rohlman, Suzanne O'Handley, Jonathan Smith, John Boyle

### Careers in the Biotechnology and Pharmaceutical Industries

\*A. Stephen Dahms, David Jensen

### Digital Libraries and Publishing in the Electronic Age

\*Marion O'Leary

### Workshop: How to get students actively involved in learning, even if you have 150 of them in the class.

\*Harold B. White, III, Richard Felder, Rebecca Brent

### Women in Science

\*Esther Sabban, Donna J. Nelson

### Women Scientists' Mentoring Session/Reception

\*Adele J. Wolfson, Diane Jones, Marilee Benore Parsons

### Sixth Annual Undergraduate Research Achievement Award Poster Competition (Sponsored by the *Biochemical Journal*)

\*Phillip A. Ortiz, Christopher Rohlman

### ASBMB Graduate/Postdoctoral Travel Award Symposium - April 20, 2002

### EB Teaching Poster Sessions

Travel Awards Available for Undergraduates, Graduates, Post-doctoral fellows, Undergraduate Faculty

## MINORITY AFFAIRS SYMPOSIUM

### Under Representation of Minorities in Science: Can the Leaks in the Pipeline be Fixed?

\*Philip A. Ortiz, Empire State Col., and Thomas D. Landerfeld, California State Univ. – Dominguez Hills

### EB Minority Symposium, Poster Session and Reception

## SPECIAL SESSIONS

### ASBMB/ABRF Symposium: What's Real In All These Microarray Data: Learning To Trust Your Intuition While Using Sound Statistical Methods

\*Ronald L. Niece, Brian Yandell, Stephen M. Schwartz, Alan Attie

### ASBMB Public Affairs Session: Presentation of the Schachman Public Service Award to Hon. John Porter, former Member of Congress (1980-2000) and Chairman (1995-2000) of the House Appropriations Subcommittee on Labor, HHS, Education, and Related Agencies. Mr. Porter will also deliver a lecture.

### New Directions and Funding Opportunities at NSF

\*Terry S. Woodin, Maryanna P. Henkart, Jean Chin

## CLOSING SYMPOSIUM - Wednesday, April 24 - 2:00 - 4:15 PM

### Proteomics and Drug Discovery - Sponsored by the NIGMS, NIH in Celebration of its 40th Anniversary

\*Richard A. Ikeda, Marvin Cassman, Marc C. Mumby, Wayne A. Hendrickson, Edward Maggio

Abstract Deadline – November 7, 2001

For information contact: ASBMB Meeting Office, 9650 Rockville Pike, Bethesda, MD 20814

Tel: 301-530-7145; Fax: 301-571-1824; [www.asbmb.org](http://www.asbmb.org)

(\*denotes Chairperson)

# UNC Professor to Receive ASBMB's Herbert A. Sober Lectureship

**D**r. Jack D. Griffith, a Professor at the Lineberger Comprehensive Cancer Center of the University of North Carolina, has been selected for the Herbert A. Sober Lectureship, which will be presented at the Society's Annual Meeting, April 20-24, 2002, in New Orleans, Louisiana.

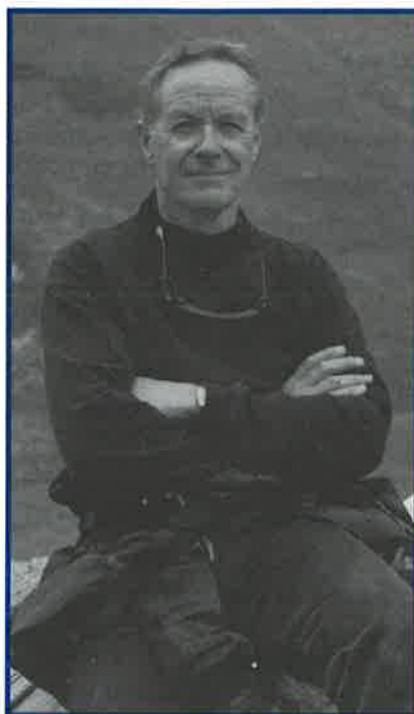
The Lectureship recognizes outstanding contributions to biochemical and molecular biological research, with particular emphasis on development of methods and techniques to aid in research. Recent recipients have included Roberta F. Colman, of the University of Delaware's Department of Chemistry and Biochemistry; Howard K. Schachman, of the University of California-Berkeley; Yuan Chuan Lee of the Department of Biology, Johns Hopkins University; Charles R. Cantor, Chief Scientific Officer at Sequenom, Inc.; Thomas D. Tullius, of Boston University; and Roger Y. Tsien; UCSD. The Lectureship provides a plaque, stipend, and transportation and expenses to present a lecture at the 2002 Meeting.

"Dr. Griffith is the most outstanding electron microscopist interested in DNA and DNA-protein complexes in the world," wrote ASBMB President Dr. Robert Wells in his letter nominating Dr. Griffith for the award. "He has made numerous technological and methodological advances with these techniques that enabled the discovery of a number of important biological phenomena that could not have been revealed by other approaches. We believe that Dr. Griffith is uniquely suited for this recognition."

"When I began developing techniques for directly visualizing DNA and DNA-protein complexes by electron microscopy (EM)," recalled Dr. Griffith, "EM of macromolecules was in general held in great skepticism by many biochemists. Over the years, by making these methods highly quantitative and by collaborating with many of the best biochemists and molecular biologists, I feel that we have slowly changed thinking so that EM of DNA and macromolecules is now accepted as a legitimate player in structural biology. The ASBMB Herbert A. Sober

award thus represents a particularly pleasing acknowledgement of the importance of this technology by the group with which we have most closely worked."

A common theme of Dr. Griffith's work has been the continued development of new electron microscopy methods, and their adaptation to DNA studies so that quantitative information can be obtained. These EM observations frequently opened doors which enabled many others to continue fruitful biochemical studies. Of particular note has been the continuing effort of the Griffith laboratory to collaborate with others. These studies have often opened new areas in which the Griffith laboratory has continued to work.



*Dr. Jack D. Griffith*

Dr. Griffith's focus on the application of electron microscopy to questions of DNA mechanics began during his graduate studies. At that time, 1965-1966, there were no reliable methods for using EM to visualize protein-free DNA or complexes of protein bound to DNA.

The Kleinschmidt method, in which the 2 nm diameter DNA is coated by a ~20 nm layer of denatured protein, had been introduced a few years earlier. This provided a means of visualizing the contour shape of DNA, but specific proteins bound to the DNA were obscured by the thick coating.

Dr. Griffith recognized the importance of directly visualizing bare DNA and DNA-protein complexes such as chromatin. In his Ph.D. work he developed this needed EM technology which included the use of carefully controlled rotary shadowcasting with tungsten. Tungsten had not been used for this purpose before and provided a much finer coating and far better resolution than gold or platinum. In parallel, procedures were established for analyzing statistically large numbers of molecules so that quantitative information about DNA-protein complexes could be derived from EM. These methods and their further refinements are now widely used by others applying EM to studies of DNA.

*Continued on page 13.*

The most dramatic early application of these new techniques involved a collaboration with Dr. Arthur Kornberg at Stanford in which *E. coli* DNA polymerase I was bound to a DNA containing binding sites (nicks) spaced by 200 bp. The images of these complexes provided the first micrographs of a defined DNA-protein complex and demonstrated that EM had the potential of providing quantitative information about macromolecular assemblies involving DNA. In work evolving from studies with Dr. Paul Berg, micrographs of the SV40 minichromosomes revealed circular chains of 21 nucleosomes spaced by ~ 40 bp of DNA, and calculation showed that each particle contained ~160 bp. These observations provided one of the most



*This electron micrograph shows a single human telomere isolated following cross blinking to preserve the fold back structure termed a t-loop. In a collaboration between the Griffith and de Lange laboratories it has been shown that t-loops are dependent on telomere specific proteins and the looping is suggested to protect telomere ends from inappropriate recognition by the DNA repair machinery. The DNA in this micrograph isolated from HeLa cells is roughly 20 kb in length.*

important steps in defining our current understanding of the nucleosomal structure of chromatin. In 1978, he moved to the Cancer Research Center at the University of North Carolina at Chapel Hill.

At UNC, his work has melded EM and biochemical tools to study many aspects of DNA metabolism. Investigation of the *E. coli* recA and the T4 UvsX

proteins provided a structural description of the complex biochemical reactions catalyzed by these proteins. Visualization of DNA bent by phased tracts of adenines carried out with Dr. Paul Englund provided an explanation for the gel electrophoretic behavior of these unusual DNAs. Results from work with recA protein led Dr. Griffith to propose that p53 protein might be able to directly recognize some forms of damage in DNA and in collaboration with Dr. Arnold Levine, now President of The Rockefeller University, EM and biochemical methods were used to verify this hypothesis. Work with Dr. Charles Richardson, of Harvard Medical School, on T7 DNA replication has provided long sought after proof of the Alberts Trombone model of looping of the lagging strand during replication.

In recent work with Dr. Robert Wells, Dr. Griffith and his colleagues uncovered an exciting connection between two common severe human genetic diseases, myotonic dystrophy (DM) and the Fragile X Syndrome (FRAX) and unusual chromatin structure, making these possibly the first "diseases of chromatin structure."

Using a combination of quantitative EM and biochemical methods, they showed that the repeating nucleotide triplet CTG found to undergo expansions in DM generates hyperstable chromatin. They then found just the opposite with the repeating CCG triplet that expands in FRAX. Here the expanded repeats create unstable chromatin, which provides a partial molecular explanation for the molecular basis of FRAX.

One of the most dramatic applications of this EM technology has been the recent discovery of telomere looping. This finding arose from an ongoing collaboration with Dr. Titia de Lange at the Rockefeller University. Mammalian telomeres consist of a repeating DNA that ends in a single stranded tail of the same repeats. Based on Dr. Griffith's work on homologous recombination, he proposed that the tail would invade the duplex repeating DNA to form a giant loop which would hide the telomere from the cellular machinery which would otherwise recognize it as broken DNA.

Telomeres from human and mouse cells were isolated and visualized by EM in a looped conformation and the paradigm of telomere looping or folding has now been extended to lower eukaryotes and including *Oxytrichia*, Trypanosomids, and yeast. With the importance of the telomere to cancer and the control of cellular aging, this discovery has provided a new means of thinking about telomere architecture and function. ☼

# ASBMB Defends Peer Review, Pans Federal Data Quality Proposals

By Peter Farnham, CAE  
Public Affairs Officer

**E**xpressing hope that the Office of Management and Budget (OMB) “will find a way to avoid having to proceed with finalization,” ASBMB submitted comments on August 13 to OMB regarding the agency’s “Proposed Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies.” The proposals were published in the *Federal Register* in June.

ASBMB President Robert Wells, writing for the Society, observed that:

“At the outset we want to stress that scientific research is based upon the principle of peer review, which focuses on assuring the quality of scientific research conducted by individual scientists. It is not the purpose of peer review to assure the objectivity of a scientist’s research, because each individual scientist approaches his or her research in a subjective manner. However, it is precisely the resulting clash of subjective ideas that leads to objectivity in science as a whole, as different explanations for observed phenomena are measured against each other through study, debate, and painstaking replication. Explanations that prove wanting soon disappear or fade into obscurity. In short, scientific information of poor quality is in the long run corrected or marginalized under the already-existing system. Therefore, for the sake of the advancement of science, and for the maintenance of an individual’s reputation, it is a paramount goal of all scientists to produce data and other scientific information that is of the best quality possible and that will withstand the vigorous clash of ideas.”

However, the OMB guidelines as written amount to “an attack on the peer review system and on federally-funded science itself.” The letter summarizes Society concerns as lack of definition of key terms, self-contradictory and vague language, the extent to which the notice applies to extramural researchers and not just intramural researchers, reporting requirements, and the short time between the end of the comment period and the statutory date the guidelines are to be finalized.

The most serious problem is definitional. The terms ‘quality,’ ‘utility,’ ‘objectivity,’ and ‘integrity’ are not defined anywhere in the notice. ASBMB notes that “it may seem to the drafters of this proposal that these terms are self-explanatory, but in fact they are not, at least as far as science and regulatory policy is concerned. Let us consider the term ‘objectivity’ by way of example.”

ASBMB commented that there is “very little data that can be called objective, since the nature of the questions asked can and often does color the nature of the data gathered. But even leaving this problem aside, once one enters the realm of interpretation of data, all pretense to objectivity disappears. Different people can and do draw different conclusions from the same data, and it is not reasonable to characterize one set of conclusions as objective and another not.

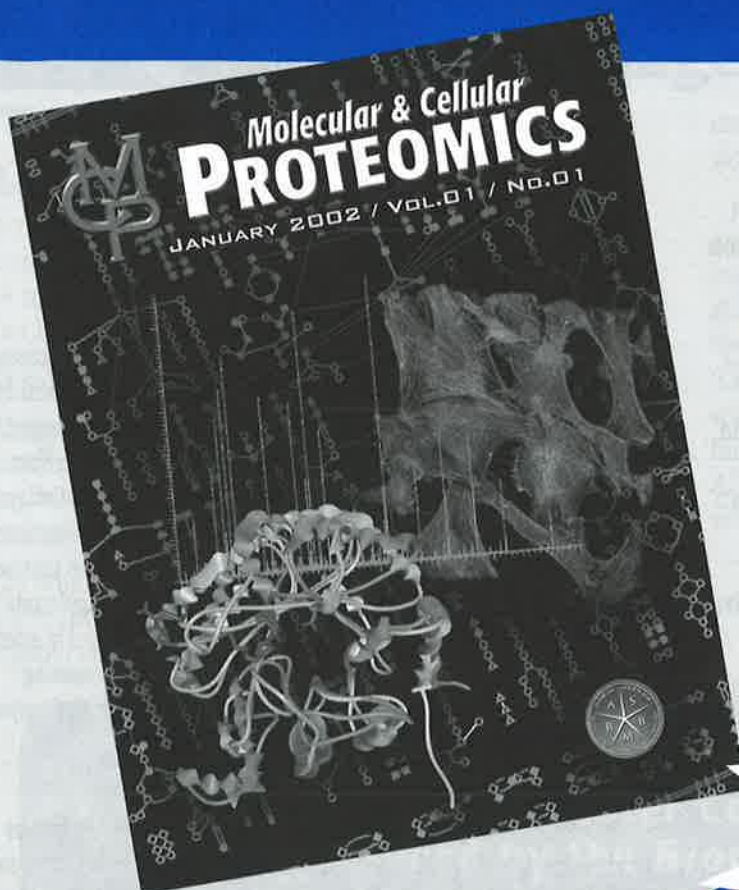
“Also troubling is the use of the term ‘accurate’ as part of assessing the quality, utility, objectivity and integrity of information. Obviously, everyone wants data to be accurate (as the term is commonly defined) and that is a goal all scientists strive for in their work. But the fact is that information can be accurately reported, be published in good faith with no intent to defraud or falsify, but in the long run turn out to be insignificant or irrelevant or even wrong. However, as we read these proposed guidelines, a federal agency with such information on its website—that is, published in good faith but subsequently proven to be wrong—would be subject to second-guessing by any ‘user’ of information on the agency website. This is an open invitation to the creation of large administrative burdens on the agency.”

Virtually every other major term in OMB’s notice goes undefined. Other problems are associated with OMB’s proposal that all information on federal websites be available for “independent analysis”. This term does not apply to the peer review system, but rather to a second level of review whereby any “user” of the information on a federal agency website can complain about or challenge data, whether the individual is qualified to assess the worth of the information or not.

While the notice is aimed at federal agency websites and intramural federal employees, ASBMB is also concerned about the extent to which the notice will apply to extramural researchers. Frequently, federal agencies disseminate information to the public in the form of brochures or reports that are often based on information generated by extramural researchers. This notice implies that there would be circumstances where an agency would be subject to administrative burdens if an extramural researcher’s work became the target of “independent analysis”.

The full text of the ASBMB letter, and a link to the OMB proposed policy, is available on the Society website—follow the “policy statements” link under “Public Affairs.” ☸

EB 2002  
Deadline for Abstracts  
November 7



## New—From the Publishers of the Journal of Biological Chemistry

Visit the Web Site  
[www.mcponline.org](http://www.mcponline.org)

Now Accepting  
Electronic  
Submissions

**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.

- In addition to manuscripts describing research advances in proteomics, articles concerning technological advances will also be accepted. In addition, MCP will publish large data sets as either appendices to regular manuscripts or as stand alone contributions. The latter must include a summary, not to exceed two printed pages, describing the germane points and importance of the information. The data sets themselves (either as appendices or as separate articles) will appear only in the on-line version. A letter of intent describing the extent and format of this supplemental material must precede submission of the manuscript.
- Electronic Manuscript Submission — 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 as a Paper in Press.
- Printed Monthly — The print version will appear on a monthly basis (without supplemental information).

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9650 Rockville Pike • Bethesda, Maryland 20814-3996  
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procedure and that all people had a right "to control what happens to their genes." She discounted the relevance to humans of the high incidence of birth defects and deaths in animal cloning experiments, saying that since different species developed different problems—and sometimes no problems—no correlation was possible.

A question arose as a result of the workshop as to exactly where the Clonaid laboratory was located. The *Washington Times* reports that the lab has been until recently on the second floor of the Nitro, West Virginia, community center. This lab was funded by \$500,000 donated by the parents of a child who died at less than a year of age after surgery following a heart defect. The parents have since cut off funding, however, and the lab has been closed, as has the earlier Clonaid lab in the Bahamas.

Through its website, Clonaid offers "eggs to women for as low as \$5,000 (plus transplantation fee)." Women are offered "the possibility to choose their future babies from a catalog showing the pictures of the egg donor women, and even meet with the candidates before making their final choice so as to judge their personality and intelligence as well as their physical aspect!" Other services Clonaid offers include cloning (at \$200,000 a clone); and an insurance service for clones which for \$50,000 "will provide the sampling and safe storage of cells from a living child or from a beloved person in order to create a clone if the child dies of an incurable disease or through an accident. In the case of a genetic disease, the cells will be preserved until science can genetically repair it before recreating the child (or an adult)."

The Academy has prepared a report on the workshop that should be available through its website early in the Fall. Most of the speakers' slide presentations are currently available for viewing on the National Academy website at:

[http://www4.nationalacademies.org/pd/cosepup.nsf/w eb/human\\_cloning?OpenDocument](http://www4.nationalacademies.org/pd/cosepup.nsf/w eb/human_cloning?OpenDocument)

ASBMB supports a five-year moratorium on human cloning, a position adopted in 1997. The statement says, "The ASBMB Public Affairs Advisory Committee supports the declaration of a voluntary five-year moratorium on cloning human beings, where 'cloning human beings' is defined as the duplication of an existing or previously existing human being by transferring the nucleus of a differentiated, somatic cell into an enucleated human oocyte, and implanting the resulting product for intrauterine gestation and subsequent birth." ❁



**ASBMB Travel Awards Available!**

## **ANNUAL MEETING**

*held in conjunction with Experimental Biology*

**April 20 - 24, 2002**

**New Orleans, Louisiana**

### **ASBMB Graduate Minority Travel Awards**

The ASBMB has been awarded a grant through the Minority Access to Research Careers (MARC) program, administered by the National Institute of General Medical Sciences, NIH, to support a portion of the expenses of minority graduate students to attend the EB 2002 Meeting in New Orleans. Special scientific sessions will be held all day on Saturday, April 20, 2002 in which all recipients of this award must participate. Several awardees will be chosen to make oral presentations in these sessions, in addition to their presentations during the main meeting. Applicants must be members of a minority group currently under-represented in science. An applicant must submit an abstract to be presented at the meeting. Successful applicants will be reimbursed up to \$1,000 for their expenses. Only U.S. residents qualify for the award.

### **ASBMB Graduate or Postdoctoral Travel Awards**

Fellowships are available to assist graduate or postdoctoral fellows attending the EB 2002 Meeting in New Orleans. Applicants must submit an abstract to be presented at the meeting. The applicant's mentor must also agree to attend the meeting. Special scientific sessions will be held all day on Saturday, April 20, 2002 in which all recipients of this award must participate. Several awardees will be chosen to make oral presentations in these sessions, in addition to their presentations during the main meeting. Successful applicants will receive complimentary registration to EB 2002 and will be reimbursed up to \$400 for their expenses.

### **ASBMB Undergraduate Travel Awards**

Funds are available to assist undergraduate students participating in the ASBMB Undergraduate Poster Competition on Monday evening, April 22, 2002, during the EB 2002 Meeting in New Orleans. The undergraduate student must be the first author of the poster. Spring 2002 college graduates are eligible. Applicants may receive up to \$300 to defray their expenses.

### **ASBMB Undergraduate Faculty Travel Awards**

The ASBMB, through the Education and Professional Development Committee, will award 20 travel fellowships of \$500 each. The fellowships, awarded competitively, are for faculty at undergraduate institutions who are primarily involved in undergraduate teaching at institutions which have limited travel resources.

Applications are available at the ASBMB web site: [www.asbmb.org](http://www.asbmb.org). Applications are due November 1, 2001.

To receive applications forms contact:

ASBMB, 9650 Rockville Pike, Bethesda, MD 20814-3996

Phone: 301.530.7145, Fax: 301.571.1824, Email: [kgull@asbmb.faseb.org](mailto:kgull@asbmb.faseb.org)



# ASBMB Takes Stand Against Anti-Evolution Language

**A**SBMB President Bob Wells joined 90 of his colleagues and signed a letter on behalf of ASBMB recommending removal, from the Senate version of H.R. 1, the Elementary and Secondary Education Act, of language that amounts to little more than a thinly disguised attack on evolution. The language is found in Title X, Section 1022:

“It is the sense of the Senate that—

“(1) good science education should prepare students to distinguish the data or testable theories of science from philosophical or religious claims that are made in the name of science; and

“(2) where biological evolution is taught, the curriculum should help students to understand why this subject generates so much continuing controversy, and

should prepare the students to be informed participants in public discussions regarding the subject.”

H.R. 1 is the centerpiece for education reform in the congress, and was President Bush’s first proposal to congress after his inauguration (hence the designation, H.R. 1). The language above was inserted late during Senate consideration of the bill by Senator Rick Santorum (R-PA). For a detailed review of the problem with the language and the events leading up to its inclusion in the bill, see the June/July 2001 issue of *ASBMB News* on our website, at [www.asbmb.org](http://www.asbmb.org). The article is on page 14.

The short letter to all House/Senate conferees was sent August 21, and reads as follows:

*Continued on page 18.*

## Sixth Annual Undergraduate Research Achievement Award Poster Competition Sponsored by the *Biochemical Journal*

**Monday Evening, April 22, 2002**

Organized by Phillip A. Ortiz, *Empire State College*, and Christopher Rohlman, *Albion College*

The ASBMB will award prizes to the undergraduate students making the best poster presentations at the Annual Meeting. Students will present their posters in a special Undergraduate Poster Competition Session on **Monday evening, April 22, 2002** at the Sheraton New Orleans. They will also be expected to present their posters separately in the main meeting, April 20-24, 2002.

The following rules apply for participation in the competition:

- ✓ The student must be an undergraduate. Spring 2002 graduates are acceptable.
- ✓ The student must be the first author on the abstract.

To enter the competition, please send an email to [kguill@asbmb.faseb.org](mailto:kguill@asbmb.faseb.org). Please include in the email:

1. *Your abstract confirmation number*
2. *The title of your abstract*
3. *Your name*
4. *Your mailing address*
5. *Your telephone number*
6. *Your email address*

Upon arriving at the competition, applicants must provide their adviser’s signature to verify their status as an undergraduate.

ASBMB Undergraduate and Undergraduate Faculty Travel Awards are Available – See page 16.  
To view the entire ASBMB Meeting program visit [www.asbmb.org](http://www.asbmb.org).

EB 2002  
Deadline for Abstracts  
November 7

## ASBMB Takes Stand . . . from page 17

The Honorable John Boehner, Chairman  
Committee on Education & the Workforce  
U.S. House of Representatives  
Washington DC 20515

The Honorable Edward M. Kennedy, Chairman  
Committee on Health, Education, Labor & Pensions  
U.S. Senate  
Washington DC 20510

Dear Conference Committee Chairmen:

The undersigned scientific and educational organizations urge the Conference Committee to remove Section 1022 from the Senate-passed version of H.R.1. This Sense of the Senate resolution introduced by Senator Santorum sets a precedent of congressional involvement in the teaching of evolution, an issue that until now has been debated at state and local levels. Given the significance of such a precedent, we do not feel that adequate consideration was given to the amendment's implications before its adoption.

Those implications have become increasingly apparent in recent weeks as anti-evolution groups have hailed the amendment's passage as a major victory. The Senate vote is being portrayed as a vindication of the 1999 decision by the Kansas Board of Education to eliminate evolution from state tests. Yet Kansas citizens recognized that the Board's decision weakened science education in their state, and they repudiated the School Board vote in the following year's elections. Today, Kansas has some of the best science education standards in the country.

As written, the apparently innocuous statements in this resolution mask an anti-evolution agenda that repeatedly has been rejected by the courts. The resolution singles out biological evolution as a controversial subject but is deliberately ambiguous about the nature of the controversy. Evolutionary theory ranks with Einstein's theory of relativity as one of modern science's most robust, generally accepted, thoroughly tested, and broadly applicable concepts. From the standpoint of science, there is no controversy. If the point of the resolution is to encourage teaching about political controversy surrounding scientific topics, then evolution is just one of a legion of issues that are the subject of political debate. It should not be singled out.

Confusing political with scientific controversy on the topic of biological evolution will weaken science education. Thank you for considering our request to remove this resolution and for your lasting commitment to ensuring that students in the nation's public schools receive the best science education possible. ❁

## New Science Education Booklets from NIGMS

The National Institute of General Medical Sciences recently published three new science education booklets: *The Chemistry of Health*, *The Structures of Life*, and *Genetic Basics*. All three are geared to an advanced high school or early college-level audience and include questions testing comprehension at the end of each chapter.

*The Chemistry of Health* (66 pages) describes how basic chemistry and biochemistry research can encourage a better understanding of human health.

The booklet also features interviews with a number of chemists and biochemists.

*The Structures of Life* (60 pages) focuses on structural biology. The booklet contains a general introduction to proteins, a chapter each on X-ray crystallography and nuclear magnetic resonance spectroscopy, and a chapter on structure-based drug design. It also features "Student Snapshots" designed to inspire young people to consider careers in biomedical research.

*Genetic Basics* (68 pages) includes descriptions of how genes work, "strange but true" exceptions to the rules of genetics, why basic research is important and worthwhile, some of the connections between genes and diseases, and the excitement of genetics research in the 21st century.

All three publications can be found on the NIGMS Web site.

The *Chemistry of Health* is at [www.nigms.nih.gov/news/science\\_ed/chemhealth.pdf](http://www.nigms.nih.gov/news/science_ed/chemhealth.pdf).

The *Structures of Life* is at [www.nigms.nih.gov/news/science\\_ed/structlife.pdf](http://www.nigms.nih.gov/news/science_ed/structlife.pdf), and *Genetic Basics* is at [www.nigms.nih.gov/news/science\\_ed/genetics.pdf](http://www.nigms.nih.gov/news/science_ed/genetics.pdf).

Free copies of these publications are available from the NIGMS Office of Communications and Public Liaison, 45 Center Drive MSC 6200, Room 1AS.25, Bethesda, MD 20892-6200, Tel: 301-496-7301, Fax: 301-402-0224, [pub\\_info@nigms.nih.gov](mailto:pub_info@nigms.nih.gov).

# Meetings Calendar

## 23rd Annual Meeting

### American Society for Bone & Mineral Research

October 12-16, 2001  
Phoenix, Arizona  
Contact: ASBMR Meetings Office  
Ph: 202/367-1161  
Fx: 202/367-2161  
Email: ASBMR@dc.sba.com  
WWW: www.asbmb.org

### Annual Biomedical Research Conference for Minority Students (ABRCMS)

October 31-November 3, 2001  
Orlando, Florida  
Ph: 202/942-9228  
Fx: 202/942-9329  
Email: abrcms@asmusa.org  
WWW: www.abrcms.org

### 2001 National Conference on Tobacco or Health

November 27-29, 2001  
New Orleans, Louisiana  
Contact: Shelly Kowalczyk  
Ph: 301/294-5437  
Email: skowalczyk@feddata.com  
WWW: www.tobaccocontrol.conference.org

## American Society for Cell Biology

### 41st Annual Meeting

Washington, DC  
December 8-12, 2001  
Ph: 301/347-9300  
Fx: 301/347-9310  
Email: ascbinfo@ascb.org  
WWW: www.ascb.org

### Glycogenomics: Impact of Genomics and Informatics in Glycobiology

### Biochemical Society Joint Meeting with the Physiological Society

December 17-19, 2001  
University of York, UK  
Contact: Meetings Office, Biochemical Society  
Ph: +44 (0)20 7580 5530  
Fx: +44 (0)20 7637 7626  
Email: meetings@biochemistry.org  
WWW: www.biochemistry.org/meetings/

## ASBMB Satellite Meetings:

### I - Transcriptional Regulatory Mechanisms

### II - Combinatorial Signaling

### III - Scientific and Technical Challenges in the Human Proteome

April 19-20, 2002  
New Orleans, Louisiana  
Contact: Kelly Gull  
Ph: 301/530-7145  
Fx: 301/571-1824  
Email: kgull@asbmb.faseb.org  
WWW: www.asbmb.org

### American Society for Biochemistry and Molecular Biology

### Annual Meeting in Conjunction with EB2002

April 20-24, 2002  
New Orleans, Louisiana  
Contact: EB2002 Meetings Office  
Ph: 301/530-7010  
Fx: 301/530-7014  
Email: eb@faseb.org  
WWW: www.asbmb.org

## CSR Seeking Comments On Proposed Guidelines

The Center for Scientific Review (CSR) at the National Institutes of Health (NIH) is continuing its efforts to revise the structure of the study sections that are responsible for reviewing most of the research grant applications NIH receives every year. The initiative is being conducted according to a schedule determined by the CSR Panel on Scientific Boundaries for Review.

The second phase of this effort involves the design of study sections within the revised integrated review group structure that was proposed during the first phase of this initiative.

In July 2001, a study section boundaries team met to develop guidelines for the new Biology of Development and Aging (BDA) Integrated Review Group and its four new study sections. The guidelines are now posted on the CSR home page at: <http://www.csr.nih.gov/PSBR/BDA/BDA.htm>

CSR is inviting comments on the BDA guidelines until November 12, 2001. Comments may be posted at: <http://www.csr.nih.gov/PSBR/BDA/BDAIntro.htm>

In addition, recommendations for the design of other Integrated Review Groups (IRGs), several of which relate to aging, are being developed by other Boundaries Teams and are being made available for comment. You may be also interested in reading and commenting on one or more of these. The IRG plans for which comments are being solicited are posted at: <http://www.csr.nih.gov/PSBR/IRGComments.htm>. One of these plans, for the Musculoskeletal Oral and Skin Sciences IRG, is currently posted; others may become available in the next few months.

It has been many years since changes to the existing CSR study section structure have been enacted. Thus, these guidelines could have long-term implications for the field of aging research. ☼

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