ASBMB NEWS NEWS NEWS

Your Newsletter

A Bimonthly Publication of the American Society for Biochemistry and Molecular Biology ★ August/September 2001, Vol. X, No.4

Stanford's Kornberg, Rockefeller's Roeder To Share 2002 ASBMB-Merck Award

Dr. Roger D. Kornberg of Stanford University and Dr. Robert G. Roeder of Rockefeller University have been selected to share the 2002 ASBMB-Merck Award, which will be presented at the Society's Annual Meeting, April 20-24 in Orlando, Florida.

In This Issue

The Award recognizes outstanding contributions to research in biochemistry and molecular biology. Recipients over the past five years include Paul Zamecnik, Alexander Rich, Robert L. Baldwin, Peter H. von Hippel; in 2001 the Award was shared by Avram Hershko and Alexander J. Varshavsky. The 2002 recipients will each receive a plaque, $5,000, and transportation and expenses for themselves and spouses to the 2002 Meeting, where the recipients will each present a lecture.

Drs. Kornberg and Roeder were recognized for their complementary discoveries, over the last 25 years, that elucidated the nucleosome as the fundamental unit of chromatin, identified RNA polymerases I, II and III, identified general and gene-specific transcription factors, identified the Mediator of transcriptional regulation, and revealed the structure of RNA polymerase II with attendant insights into the transcription initiation and elongation mechanisms.

Dr. Kornberg's discovery of the nucleosome was responsible for the inception of the current era in chromatin studies and Dr. Roeder initiated the molecular dissection of the basal transcription machinery. Dr. Roeder discovered RNA polymerase II and the general transcription factors while Dr. Kornberg and co-workers determined the atomic structure of RNA polymerase II, as well as the topography of

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ASBMB Annual Meeting to be held in conjunction with Experimental Biology April 20-24, 2002

ASBMB Members to be mailed Call for Papers in September.

Abstract Submission Deadline: November 1, 2001

See page 7 for ASBMB Program and page 5 for travel funding opportunities.

ASBMB NEWS NEWS NEWS

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Comments
Please direct any comments or questions concerning *ASBMB News* to:
John D. Thompson
ASBMB News Editor
9650 Rockville Pike
Bethesda, MD 20814-3996
Phone: 301-530-7145
Fax: 301-571-1824
E-mail: jthompson@asbmb.faseb.org

We Get Letters . . .

Problems With Visa Requests

Based on my own experience and conversations with researchers at other universities, it is my impression that our government has tightened up considerably on granting visa requests for both graduate students and post-doctoral students from the Peoples Republic of China.

I have had a student in each of those categories who have had their visa requests denied. The graduate student had his request turned down twice but obtained it on the third try.

Since the demographics are such that it is very difficult to find American students to fill available positions, a broad occurrence of this problem will hinder progress in important life science research.

The policy for not granting visas is apparently based on the impression of an embassy officer that a student will not return to China. This nebulous concern is seemingly being applied in an arbitrary manner, and I suspect that other investigators engaged in important biomedical research may have encountered this problem.

I suggest that ASBMB be willing to collect information from such investigators, so that the extent and impact of this problem might (if warranted) be conveyed to the appropriate government offices.

Thank you for considering this request.
Thomas E. Roche, Ph.D.
Professor, Department of Biochemistry
Kansas State University
785 532 6116
bchter@ksu.edu

NOTE: Those who have had similar problems in obtaining student visas are encouraged to communicate by e-mail or letter to the Editor of ASBMB News. See address at left.

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.

House Passes Anti-Cloning Bill

The House approved a broadly based ban on human cloning on July 31 after slightly more than two hours of debate. The bill bans human cloning for both therapeutic and reproductive purposes.

The bill, H.R.2505, the Human Cloning Prohibition Act of 2001, had been offered by Reps. Dave Weldon (R-FL) and Bart Stupak (D-MI) and was approved by a margin of 265-162. An amendment by Rep. Jim Greenwood (R-PA) that would have allowed the technique of somatic cell nuclear transfer to be used to create embryos for research and therapeutic purposes was voted down, as were other attempts to weaken the ban. One amendment that was accepted would mandate a review of the ban in several years in light of new developments in medical technology.

Greenwood's substitute contained the same provisions as H.R. 2608, which he introduced July 24 and which the Administration opposes. The Weldon bill was endorsed by the White House, which applauded its passage in a statement. The Greenwood bill has been endorsed by several powerful organizations within the biomedical research community, including the Association of American Medical Colleges (AAMC) and the Biotechnology Industry Organization (BIO).

The Weldon bill prohibits both reproductive cloning and the use of somatic cell nuclear transfer technology to produce human embryos for research purposes.

Proponents for H.R. 2505 contended that the bill would outlaw public or private cloning of a human being, but would permit stem cell research under the NIH proposed guidelines. Those opposing the bill contended its prohibitions went too far because it did not distinguish between reproductive cloning and use of cloning for research purposes; it cuts off this work and prevents its therapeutic applications from reaching patients. Also, it bans the import from other countries of treatments developed using cloning techniques.

Weldon said he hoped the Senate would pass a companion bill (introduced in April by Senator Sam Brownback [R-KS] with eight cosponsors), but this is considered unlikely by many observers. Sen. Arlen Specter (R-PA), a strong proponent of stem cell research, claims he has a veto-proof majority in favor of broader stem cell research legislation, which he introduced several months ago, and Senator Ted Kennedy (D-MA), Chairman of the Senate Health Committee, has indicated he will not bring up restrictive legislation.

Stripped to its most basic elements, the Greenwood bill would ban cloning (specifically, the technique of somatic cell nuclear transfer) of a human being for purposes of reproduction, but would allow strictly regulated cloning of human embryos for the production of stem cells to be used in research. Supporters of the

Continued on page 9.

THE STEM CELL ISSUE AS LONDON SEES IT:

If the U.S. Won't Lead, the U.K. Will

Will Britain take the lead in stem cell research? One British authority thinks that possible

"If the United States falters—if the government decides not to allow federal funding of stem cell research—the United Kingdom will take the lead. About that there is no question," is how Arlene Judith Klotzko, writer in residence at the London Science Museum, and author of "The Cloning Sourcebook," put it in a recent article in London's Times.

Klotzko predicted that without government involvement, such research would proceed in the U.S. but in with a lack of rigorous scientific and ethical oversight. In Britain, however, A 1990 law provides comprehensive regulation of *in vitro* fertilization treatment, donated eggs and sperm, and embryo research, and it allows the creation of human embryos for such research. An amendment to the act in January, expanded the list of permissible uses for embryos to allow stem cell research and therapy, as well as the creation of human embryos by cloning, but stopping short of implanting the clones. These cloned embryos will only be used as the source of stem cells, and through them cells and tissues that are an immunological match for the donor.

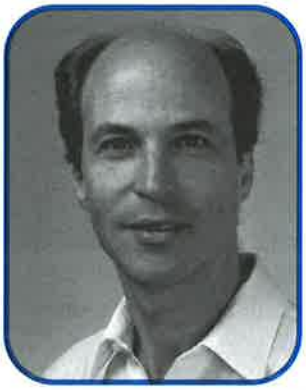
The author commented that the proposal under consideration by the Bush Administration is much more modest than the British arrangement. However, she wrote, "The proposal that the National Institutes of Health has put forward for Bush to approve brings with it stringent scientific and ethical oversight of any American scientist who receives federal money."

ASBMB-Merck Award . . . *from page 1*

the giant complex formed by the polymerase and general transcription factors at the initiation of transcription.

Dr. Kornberg discovered Mediator in yeast and Dr. Roeder established its role in human cells. Finally, Dr. Roeder works with human cells while Dr. Kornberg's main experimental organism is *Saccharomyces cerevisiae*.

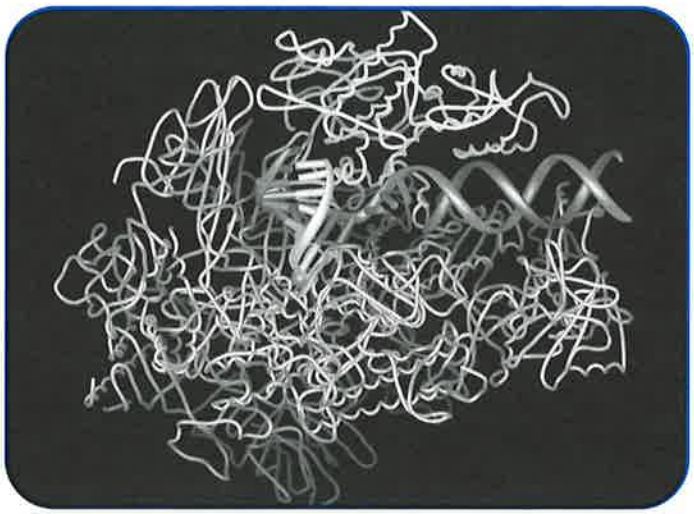
"Roger Kornberg," said Alexander Varshavsky, Smits Professor of Cell Biology at Caltech, in submitting the Kornberg-Roeder nomination, "has the



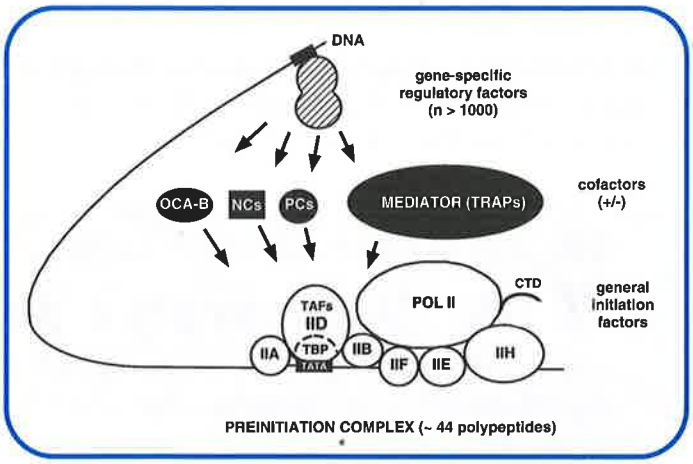
Dr. Roger Kornberg (at left), of the Department of Structural Biology at Stanford University School of Medicine, and Dr. Robert Roeder of the Laboratory of Biochemistry and Molecular Biology at Rockefeller University will share the ASBMB-Merck Award.

singular distinction of being the chief figure in the development of the concept of nucleosome, and is also one of the world leaders in research on eukaryotic transcription. His many and pioneering contributions to the biochemistry of transcription, together with his seminal work on the nucleosome, two-dimensional protein crystallography, its spectacularly successful use to determine three-dimensional structures of key transcription machines, and finally the atomic structure determination of RNA polymerase II, make Roger Kornberg a truly unique figure in this field."

"The discovery of three nuclear RNA polymerases in 1969 provided an early indication of complexity in the eukaryotic transcriptional machinery, but the ensuring three decades have revealed a much more profound structural and functional complexity than anyone might have imagined," said Dr. Roeder in discussing his research. "It is most gratifying to have our sustained efforts on this problem, with their origins in a classical biochemical approach, rewarded with the ASBMB-Merck Award. It is equally pleasing to see the problem brought full circle with my co-awardee's atomic resolution structure of an eukaryotic RNA polymerase whose activity was first described so long ago."



Dr. Kornberg and co-workers determined the atomic structure of RNA polymerase II, as well as the topography of the giant complex formed by the polymerase and general transcription factors at the initiation of transcription. Seen above is the structure of the polymerase II transcribing complex with portions of Rpb2 that form one side of the cleft omitted to reveal the nucleic acids. Bases of ordered nucleotides are depicted as cylinders protruding from the backbone ribbons.



Gene Action in Eukaryotes Involves Synergistic Interactions between Complex Arrays of Gene-Specific Regulatory Factors, Intermediary Cofactors, and RNA Polymerase and Cognate General Initiation Factors. Graphic courtesy of Dr. Roeder

Transcription of protein-coding genes is affected by RNA polymerase II and corresponding general initiation factors (TFIID, TFIIA, TFIIB, TFIIE, TFIIF, and TFIIH) that are assembled into a pre-initiation complex on common core promoter elements. Transcription is further regulated by gene-specific factors that bond to distal promoter elements and communicate with RNA polymerase II and general initiation factors through diverse cofactors. The latter include the multicomponent TRAP/Mediator complex, the major conduit for communication, as well as general positive cofactors (PCs) and negative cofactors (NCs), components of the general transcription machinery (TFIIA, TAF subunits of TFIID), and cell type-specific cofactors such as OCA-B.

"I am greatly honored to receive this Award, and particularly pleased to share it with Dr. Robert Roeder," said Dr. Kornberg. "It comes at the end of a long and arduous pursuit, and also I hope at the beginning of a new era in transcription research."

"The work of Robert Roeder," stated Varshavsky, "is in a class by itself as well. From his discovery of RNA polymerases I, II and III, to his discoveries of general transcription factors, the first gene-specific activator, and the demonstration of Mediator and other general and cell-type-specific coactivators in human cells, Robert Roeder was, and continues to be, a major leader in a wide range of studies that have in common the quest to understand, in detail and depth, transcription and its regulation in eukaryotes."

Drs. Kornberg and Roeder were junior scientists at the outset of the investigations recognized by the ASBMB-Merck Award. Dr. Kornberg was a postdoctoral fellow at the MRC Laboratory of Molecular Biology when he discovered the nucleosome in 1973-74. Even though his formal position was that of a junior scientist, he initiated research on chromatin entirely by himself, designed the approach to the problem, and conceived the solution. As a result, he published the discovery of the nucleosome and the underlying histone octamer independently.

Dr. Roeder was a graduate student with Dr. William Rutter when he discovered RNA polymerases I, II, and III in 1969. This work, co-published with Dr. Rutter, was conceived by Dr. Roeder and accomplished in a laboratory with no other ongoing studies on transcription. Subsequently, he alone pursued the problem in depth.

"The discovery of three nuclear RNA polymerases in 1969 provided an early indication of complexity in the eukaryotic transcriptional machinery," recalled Dr. Roeder, "but the ensuing three decades have revealed a much more profound structural and functional complexity than anyone might have imagined. It is most gratifying to have our sustained efforts on this problem, with their origins in a classical biochemical approach, rewarded with the ASBMB-Merck Award. It is equally pleasing to see the problem brought full circle with my co-awardee's atomic resolution structure of an eukaryotic RNA polymerase whose activity was first described so long ago."

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 will be available in September 2001. 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

HHMI Investigator to Receive 2002 ASBMB–Amgen Award

Dr. Joseph Heitman will be the recipient of the 2002 ASBMB–Amgen Award, which will be presented at the Society's Annual Meeting, April 20-24, 2002, in New Orleans, Louisiana.

The Award is made to a new investigator (defined as an individual with no more than 15 years experience since receipt of a doctorate) for significant achievements in the application of biochemistry and molecular biology to the understanding of disease. However, the implications for human disease should be evident. Nominations must be originated by Society members, but the nominees need not be ASBMB members. Recipients over the past five years include Joan and Ronald Conaway, Tyler Jacks, Masashi Yanagisawa, Patrick J. Casey, and Thomas Ried.

The Award consists of a silver and crystal commemorative sculpture, $5,000 to the recipient, a $20,000 unrestricted research grant, and transportation and expenses to present a lecture at the 2002 Meeting. The recipient will also be invited to Thousand Oaks, California, Amgen's headquarters, to present a seminar and interact with the staff.

Dr. Joseph Heitman is an Associate Professor in the Departments of Genetics, Pharmacology and Cancer Biology, Microbiology, and Medicine at Duke University Medical Center.

Dr. Heitman is an Associate Professor in the Departments of Genetics, Pharmacology and Cancer Biology, Microbiology, and Medicine at Duke University Medical Center, as well as an Associate Investigator of the Howard Hughes Medical Institute. In addition, he was recently named a Burroughs Wellcome Scholar in Molecular Pathogenic Mycology, and is a member of the Duke University Mycology Research Unit.

In nominating Dr. Heitman for the Award, Robert J. Lefkowitz, M.D., James B. Duke Professor of Medicine, and Ralph Snyderman, M.D., Chancellor for Health Affairs and Dean, Duke University School of Medicine, wrote:

"In the relatively short period of time he has been here, his laboratory has made major contributions to the study of immunosuppressant drug action in yeast and applied this understanding to address fundamental questions of pathogenicity of Cryptococcus. His work has had a very large impact on this growing field and this, together with his past studies of mechanisms of immunosuppressant drug action, makes him a most appropriate candidate for the Amgen Award."

Dr. Heitman is recognized for his pioneering studies using the baker's yeast *Saccharomyces cerevisiae* as a model to understand how all cells sense and respond to their environments and for his implementation of novel molecular approaches to develop the pathogenic basidiomycete *Cryptococcus neoformans* as a model fungal pathogen. Using elegant genetic and molecular approaches, his studies have contributed to elucidate at a molecular level how immunosuppressive drugs prevent the rejection of transplanted organs, how pathogenic fungi infect humans and can be targeted for therapy, and how cells sense and respond to nutrients including sugars and nitrogen sources.

Dr. Heitman has made significant contributions to the understanding of human disease and therapy in two distinct areas: transplantation biology and infectious disease. First, his studies have contributed to elucidate the mechanisms of action and targets of the immunosuppressants cyclosporin A (CsA), FK506 (tacrolimus), and rapamycin (sirolimus), which are all now in clinical use to prevent rejection of transplanted organs.

His discoveries include the identification of the FK506 and rapamycin receptor as the FKBP12 prolyl isomerase, the identification of the TOR kinases as the targets of the FKBP12-rapamycin complex, the demonstration that the protein phosphatase calcineurin is a conserved target of the cyclophilin-cyclosporin and FKBP12-FK506 complexes, and the elucidation of functions of calcineurin and TOR kinases in microorganisms. Much of these studies were conducted with his long term collaborator, Dr. Maria Cardenas, an associate research professor in the Department of Genetics at Duke University.

In addition, his pioneering studies using the yeast *Saccharomyces cerevisiae* as a model have led to significant insights into conserved signal transduction

Continued on page 8.

Abstract Deadline: November 7, 2001

ASBMB Annual Meeting

held jointly with Experimental Biology

April 20-24, 2002, New Orleans, Louisiana

Organized by Ralph A. Bradshaw, UC, Irvine and
Joan W. Conaway, Stowers Inst. for Med. Res., Kansas City, MO

ASBMB Satellite Meetings – April 19–20, 2002

Transcriptional Regulatory Mechanisms
Organized by Ronald C. Conaway, *Stowers Inst. for Med. Res.* and
Joan W. Conaway, *Stowers Inst. for Med. Res.*

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

Scientific and Technical Challenges in the Human Proteome
Organized by Alma L. Burlingame, *UCSF* and John T. Stults, *Genentech, Inc.*

Keynote Lecture

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

Plenary and Award Lectures

Kai Simons, *Max Planck Inst., Dresden*
John Reed, *Burnham Inst.*
Jerry L. Workman, *HHMI, Penn State Univ.*
Arthur E. Johnson, *Texas A&M University Health Sci. Ctr.*

ASBMB-Merck Award
ASBMB-Amgen Award
Avanti Award in Lipids
Patricia C. Babbit, *UCSF*

Schering-Plough Research Institute Award
Herbert A. Sober Lectureship
William C. Rose Award

ASBMB Symposia

THEME I – CELLULAR CONTROL

Role of Mitochondria in Apoptosis
*Douglas Green, Craig B. Thompson

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

Endoplasmic Reticulum Stress Response
*Randal J. Kaufman

Cell Cycle M-phase Control
*David Morgan

Combinatorial Signaling Satellite Highlight Symposium

THEME II – GENE REGULATION

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

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

Shuttling To and From the Nucleus
*Douglass J. Forbes, *UCSD*

Protein Trafficking at Membranes
*Robert E. Jensen

THEME III – PROTEOMICS

Protein Machines
*Jyoti Choudhary

Chemically Reactive Probes
*James A. Wells, Matt Bogyo

Protein Dynamics & Function
*Arthur G. Palmer, III

Evolution of Function in (β/α)8-Barrels
*John A. Gerlt, Frank Raushel, Reinhard Sterner

Drug Discovery and Chemically Reactive Probes

SPECIAL FOCUS SESSIONS

Regulation of Development and Immunity by Glycoconjugates
*John Lowe, Carlos B. Hirschberg

Lipid Traffic and Enzymology in Membrane Assembly
*Dennis R. Voelker, Masahiro Nishijima

Enzyme Structure, Function and Mechanism
*Vern L. Schramm, JoAnne Stubbe, Daniel Herschlag

Animal Models for the Study of Metabolic Processes
*Richard W. Hanson, Domenico Accili, Mulchand S. Patel

(*denotes Chairperson)

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www.faseb.org/meetings.

pathways that govern filamentous differentiation of *S. cerevisiae* and virulence of the human fungal pathogen *Cryptococcus neoformans*, now the leading cause of fungal meningitis and an important opportunistic pathogen in organ transplant recipients and AIDS patients. Dr. Heitman's studies and implementation of pioneering methodologies have contributed to develop *Cryptococcus neoformans* as a model system for fungal pathogenesis, and have elucidated the molecular basis of fungal virulence and delineated mechanisms of antifungal drug action and identified novel targets for therapeutic intervention. Many of these studies were conducted as part of a long term collaboration with Dr. John Perfect, a Professor in the Division of Infectious Diseases, Department of Medicine at Duke University.

Dr. Heitman's studies on fungal development have also defined mechanisms by which cells sense and respond to nutrients. His studies identified a novel G protein coupled receptor pathway that senses glucose and controls cAMP production to trigger fungal cell development and virulence. Dr. Heitman demonstrated that an ammonium permease structurally and functional related to the mammalian Rh blood group antigens allows fungal cells to forage for nutrients during adverse conditions. Similar mechanisms may operate to sense nutrients in plants, animals, and humans and may be affected in different disease states.

...his laboratory has made major contributions to the study of immunosuppressant drug action in yeast...

Dr. Heitman pioneered the use of bakers' yeast as a model system to analyze the mechanisms of action of the clinically important immunosuppressants cyclosporin A, FK506, and rapamycin. These agents suppress the immune system by blocking signal transduction cascades required for the activation of T-lymphocytes. CsA and FK506 block responses to antigen presentation, whereas rapamycin inhibits proliferation in response to interleukin-2.

Because these drugs are all natural products of soil microorganisms, Dr. Heitman hypothesized that their natural role might be as antimicrobial agents to inhibit growth of competing microorganisms. Based on this premise, he initiated studies in *S. cerevisiae* to identify the drug targets and understand the molecular basis of drug action. His early studies identified a 12 kd rapamycin and FK506 binding protein in yeast, FKBP12, and analysis of the cloned gene revealed that the yeast and human FKBP12 proteins are remarkably conserved.

Although the FKBP12 protein binds rapamycin and FK506 with high affinity, many questioned whether this could be the relevant target of T-cell selective drugs since it is abundant and ubiquitous. It was also not clear how a single target could explain the differential effects of rapamycin and FK506 in yeast and T-cells. Dr. Heitman addressed these issues in yeast. First, he discovered that rapamycin is potently toxic to yeast cells.

Second, by gene disruption he demonstrated that FKBP12 is highly conserved but not essential. A striking phenotype of mutants lacking FKBP12 was complete resistance to rapamycin. This finding demonstrated that inhibition of FKBP12 by rapamycin is not the mechanism of drug action, because otherwise mutants lacking FKBP12 would be inviable. Instead, Dr. Heitman's findings revealed that both the drug and the FKBP12 protein were required for rapamycin action, supporting a model in which the FKBP12-rapamycin complex is the active agent. In subsequent genetic studies, Dr. Heitman identified the targets of this complex as the TOR kinases, which recent studies reveal function in a nutrient sensing pathway that is conserved from yeast and fungi to humans.

In receiving the ASBMB-AMGEN award, Dr. Heitman commented: "People initially thought we were crazy to use a single celled organism like yeast as a model to understand how drugs inhibit the human immune system. Yet through our studies we have come to realize that the basic molecular principles of life were drafted very early in evolution, and that what is true for a simple yeast cell is very often true for our own more complex cells. We are thrilled and empowered to continue on the course we have set using yeast and the pathogenic fungus Cryptococcus neoformans as models to understand how the immune system functions, how pathogens infect their hosts, and how cells sense and respond to nutrients."

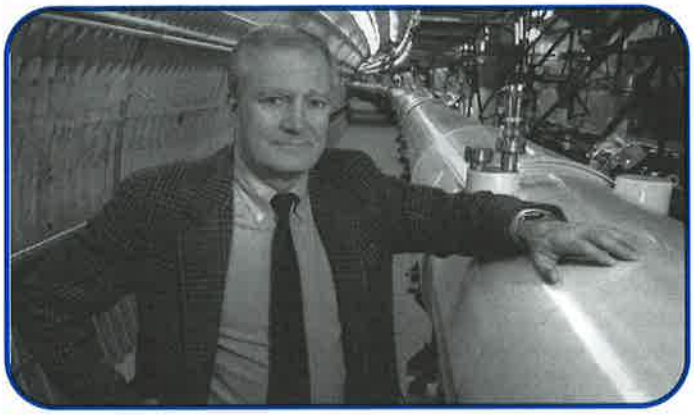
President Bush Nominates Physicist John Marburger as Science Adviser

President George W. Bush on June 25 announced his intention to nominate Dr. John H. Marburger III as Director of the Office of Science and Technology Policy and as assistant to the President for Science and Technology. He is currently the Director of the U.S. Department of Energy's Brookhaven National Laboratory and President of Brookhaven Science Associates.

In a statement issued on June 26, Dr. Marburger said he was "delighted" to be nominated, and expected confirmation hearings to begin in September. In a congratulatory letter to Dr. Marburger, George Trilling, President of the American Physical Society, noted that "given the importance of science in many issues of public policy, the country is fortunate that the President has nominated a distinguished scientist and administrator" as OSTP Director.

Dr. Marburger's appointment brings to closure an omission—no science adviser—that had been a source of growing concern in the science community. Rumors had abounded that the President did not intend to appoint a science adviser, or that he was going to depend solely upon a "technology" adviser. However, the Marburger announcement was greeted in the science community with near universal favor.

During Dr. Marburger's tenure at Brookhaven, the National Laboratory put into operation the world's largest particle accelerator for nuclear physics research, expanded biomedical research and began work on the study of human proteins, an outgrowth of the human genome initiative. He also began a cleanup of contaminated soil and water on the grounds of the 55,000-acre lab.



Dr. John H. Marburger III

Dr. Marburger is presently on a leave of absence from the State University of New York at Stony Brook where he served as President and Professor from 1980 to 1994 and as a University Professor of Physics and Electrical Engineering from 1994 to 1997. Prior to that he served as Dean of the College of Letters, Arts and Sciences at the University of Southern California from 1976 to 1980. He has been a member of numerous professional, civic and philanthropic organizations including the Universities Research Association, the Advisery Committee to the New York State Senate Committee on Higher Education and the Board of Directors of the Museums at Stony Brook. He is a graduate of Princeton University and received a Ph.D. in Applied Physics from Stanford University.

Anti-Cloning Bill . . . *from page 3*

Greenwood bill are concerned that an all-out ban on cloning research would have a negative impact on research using human pluripotent embryonic stem cells.

Interest in stem cell research, human cloning, and other aspects of modern biology has become extremely widespread among the general public in recent months. In addition to articles in most of the major newspapers and magazines in recent weeks, the subject is even being discussed on talk radio. "Imus in the Morning," the morning drive-time radio show hosted by shock-jock Don Imus, has actually had a number of very sophisticated discussions of this subject in recent weeks, including interviews with Senators Pete Dominici (D-NM) and Bill Frist (R-TN), and with actor/biomedical research advocate Christopher Reeve.

On August 1, one day after the House passed the Weldon bill, Senator Specter held his ninth hearing on issues associated with stem cell research. The hearing dealt with patenting and ethical issues associated with cloning and stem cell research. The House's action was mentioned only in passing, when Specter said, at the end of his almost three-hour hearing, that the subcommittee had just spent more time that morning discussing the issue than the entire House spent in debate the day before.

Postdoctoral Fellowships Available at NIH

The Pharmacology Research Associate (PRAT) Program of the National Institute of General Medical Sciences (NIGMS) is a competitive postdoctoral fellowship program to pursue research in one of the laboratories of the National Institutes of Health (NIH) or the Food and Drug Administration (FDA). This can include research in the areas of signal transduction, drug metabolism, immunopharmacology, chemistry and drug design, structural biology, endocrinology, neuroscience, and clinical pharmacology, among other areas.

Potential fellows may make an application together with a preceptor to the PRAT program. Selected fellows receive a two-year appointment, salary, supplies, and travel funds from the NIGMS to support research in the preceptors' laboratories. Candidates may apply prior to coming to NIH or FDA, or they may have started postdoctoral research at NIH or FDA within the 12-month period prior to the deadline for application receipt.

Applications are due on or before January 3, 2002, for fellowships starting in October of that year. Only U.S. citizens or permanent residents are eligible. Contact the PRAT program assistant at 301-594-3583 or prat@nigms.nih.gov to request a PRAT fact sheet and application kit, or visit the NIGMS home page at http://www.nih.gov/nigms/about_nigms/prat.html to view the PRAT fact sheet.

MCP Editor Announces Editorial Board

"We're extremely fortunate to have such an outstanding group of associate editors and I'm extremely gratified to have some of the foremost people in the field of proteomics on the editorial board," said Dr. Ralph A. Bradshaw, in announcing the associate editors and members of the editorial board of ASBMB's new publication, *Molecular and Cellular Proteomics*. "The Society is extremely fortunate in having the services of such a distinguished group of more than 50 scientists. This outstanding group is made up of some of the best practitioners in the field of proteomics and we expect an equally outstanding publication."

Dr. Bradshaw, of the Department of Physiology and Biophysics at the University of California, Irvine, is the editor of the new publication, and the deputy editor will be Dr. A. L. Burlingame, a professor in the Department of Pharmaceutical Chemistry at the University of California, San Francisco.

Associate editors are:

Ruedi H. Aebersold,
Institute for Systems Biology,
Seattle

Patricia C. Babbitt,
University of California,
San Francisco

Steven A. Carr,
Millennium Pharmaceuticals, Inc.

Julio E. Celis,
Danish Center for Human Genome Research

Raymond Deshaies,
California Institute of Technology

Dr. Kevan M. Shokat,
University of California,
San Francisco

Members of the MCP Editorial Board were, *as of August 3:*

Ruben Abagyan
Natalie G. Ahn
Leigh Anderson
Philip Andrews
Adam Arkin
Terri Attwood
Bonnie L. Bassler
John J.M. Bergeron
Michael Blaber
Matthew Bogyo
Dolores Cahill
Brian Chait
Fred E. Cohen
Benjamin F. Cravatt
Craig M. Crews
Trishna N. Davis
Norman J. Dovichi
Mark H. Ellisman
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Minoru Fukuda
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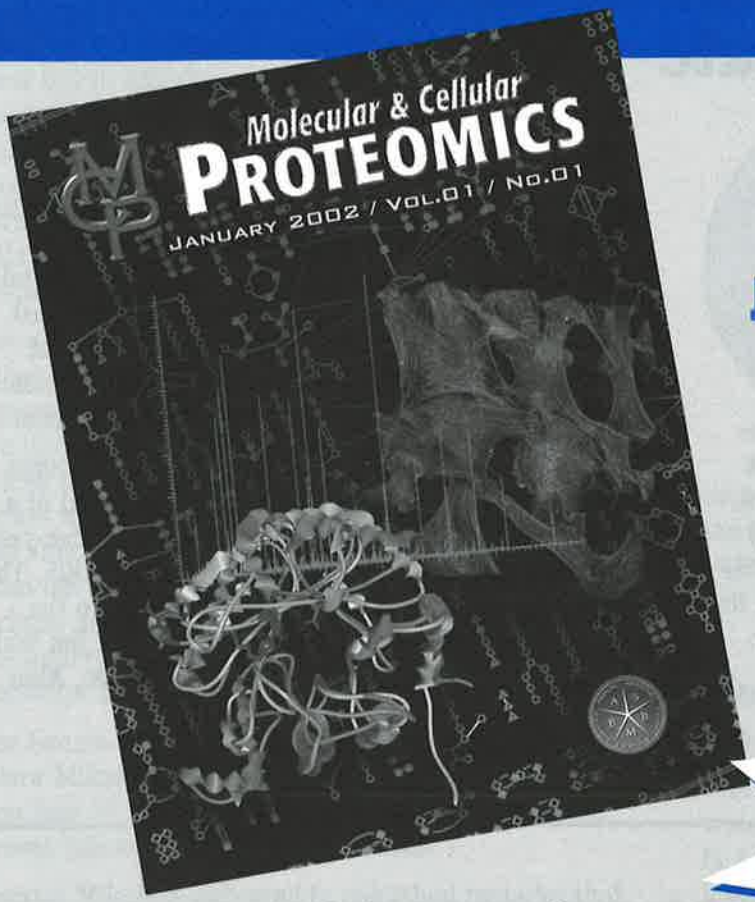
Karl-Anders Karlsson
Randall Wharton King
Elizabeth A. Komives
Eugene V. Koonin
Hakon Leffler
Lance Liotta
Steve W. Michnick
Jeremy Minshull
Gaetano Montelione
Judith Murray-Rust
Kenneth E. Neet
Torben Orntoft
Rainer Pepperkok
Eric M. Phizicky
Thierry Rabilloud
Richard W. Roberts
Carol V. Robinson
Peter Roepstorff
Andrej Sali
Ben Shen
Kai Simons
David F. Smith
Kenneth G. Standing
Robert Stroud
John Stults
Marc E. Surette
Mathias Uhlen
Alain Van Dorsselaer
Thomas C. Vanaman
Marvin Vestal
Marc Vidal
Kenneth W. Walker
Michael Waterfield
Michael B. Yaffe



New–From the Publishers of the Journal of Biological Chemistry

Visit the Web Site 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).

NSF Gets 9% Increase in House; But Only 5% in Senate

By Peter Farnham, CAE
Public Affairs Officer

The House Appropriations Subcommittee on VA/HUD and Independent Agencies approved on July 10 a $367 million, 9.3 percent increase for a total of $4.840 billion for the National Science Foundation for FY 2002, with full appropriations committee approval following on July 17. The House approved the VA/HUD bill on July 30. However, in a major disappointment for NSF advocates, on July 19, the Senate Appropriations Committee provided only $256 million (for a total of $4.672 billion) for the NSF for FY 2002, a 5.6 percent increase. At press time, the VA/HUD bill was being debated on the Senate floor. The table below contains details on the House and Senate numbers.

House Numbers

Although there are a few programs at NSF that have been especially targeted for increases by various members of Congress, the increase in the House bill in general is substantial and mostly across-the-board. NSF's research programs received an 8.7 percent increase in the aggregate, with the biological sciences directorate getting an increase of almost 9 percent.

The House-approved NSF appropriation is a vast improvement over the administration proposal of a 1.3 percent increase, and is much closer to the five-year goal of doubling the NSF budget by Fiscal 2005. The relatively generous increase is largely due to the efforts of VA/HUD Subcommittee Chairman Jim Walsh (R-NY) and ranking subcommittee Democrat, Alan Mollohan (D-WV).

FY 2002 NSF APPROPRIATIONS (dollars in millions)

	Subcommittee Markup	Request	Current plan	Increase above request	Pct. change over request
Total	4840.1	4472.5	4426.1	367.6	+8.2
R&RA	3642.3	3326.9	3350	315.4	+9.5
BIO	529	483.1	485.4	46	+9.5
CISE	521	470.4	477.9	51	+10.8
ENG	469	431	430.8	38	+8.8
GEO	613	558.5	562.2	55	+9.7
MPS	927	863.6	850.8	64	+7.3
SBE	179	163.2	164.4	16	+9.7
OPP	299	276.6	273.3	23	+8.1
IA	106	80.6	97.7	26	+31.5
MRE	135.3	96.3	121.6	38.9	+40.0
EHR	886	872.4	785.6	14	+1.5
S&E	170	170	160.9	0	0
OIG	6.7	6.7	6.3		+6.0

Unfortunately, the VA/HUD subcommittee received too small an allocation under the 2002 budget resolution to fund fully all the programs under this very diverse bill.In addition to NSF, the bill includes the Department of Housing and Urban Development, the Department of Veterans Affairs, and about two dozen independent federal agencies including the Environmental Protection Agency and NASA, and smaller agencies such as the American Battle Monuments Commission.

The subcommittee was therefore forced to make cuts in other programs within its jurisdiction. Some housing programs and veteran's medical care were reduced, while the Corporation for National and Community Services (Americorps) was terminated. The Americorps program was eliminated "without prejudice," according to the subcommittee report—that is, Chairman Walsh needed the money to fund other subcommittee priorities, but expected Americorps to be restored later in the appropriations process. The Senate fulfilled this expectation a week later, and restored the program.

The Senate Subcommittee on VA/HUD under Chair Barbara Mikulski (D-MD) marked up its version of the bill on July 19, with Senate Appropriations Committee approval following that same afternoon.

Senator Mikulski indicated in published remarks that her priorities in the bill were "veterans, needs of the working poor, rebuilding neighborhoods and communities, and investing in science and technology." Regarding NSF, she noted that "While I wish the subcommittee had more resources for science, we did the best we could do given our allocation. I remain fully committed to doubling the budget for NSF over the next five years . . ."

Mikulski: "...we did the best we could do given our allocation. I remain fully committed to doubling the budget for NSF over the next five years . . ."

No Movement Until Fall on NIH Funding

In related news, the Labor/HHS appropriations bill, which funds the National Institutes of Health, will not be taken up by the Subcommittee on Labor/HHS until late September. The Bush Administration has asked for a 13 percent increase for NIH in fiscal 2002.

DMS/NIGMS Research Grants Available

The Department of Mathematical Sciences at NSF and the National Institute of General Medical Sciences at NIH plan to support research in mathematics and statistics related to mathematical biology research. Both agencies recognize the need for additional research at the boundary between the mathematical sciences and the life sciences. This competition is designed to encourage new collaborations, as well as to support existing ones. Awards made through this competition are dependent upon responsiveness of the proposals to the announcement, the quality of the proposed research, and the availability of funds. DMS and NIGMS anticipate making 20-25 awards totaling about $6 million, in fiscal year 2002. The projected range is from $100,000 to $500,000 per award per year, with durations of 4-5 years. Awards made from this competition may be made by either DMS or NIGMS, at the option of the agencies, not the grantee.

Proposals should be in accordance with the general guidelines contained in the NSF Grant Proposal Guide, which available electronically on the NSF Web Site at: http://www.nsf.gov/cgi-bin/getpub?nsf012. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone 301-947-2722, or by e-mail from pubs@nsf.gov.

OMB Seeks to Maximize Quality, Usefulness of Government Data

A set of "Proposed Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies" was published in the *Federal Register* by the Office of Management and Budget (OMB) on June 28. Comments were due August 13. ASBMB's Public Affairs Advisery Committee has forwarded comments to OMB and they will be summarized in the next issue of *ASBMB News*.

Researchers and senior NIH officials reportedly concerned that guidelines could force scientists to turn over data to almost anyone.

The statutory basis of these guidelines is found in an amendment to the Treasury, Postal Service and General Government appropriations bill for FY 2001. The amendment was offered by Rep. Jo Ann Emerson (R-MO), a member of the House Appropriations Committee. It directs OMB to issue by September 30, 2001, government-wide guidelines that "provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies."

The amendment also requires all federal agencies to issue guidelines for data quality within one year of the publication of OMB's guidelines, that "administrative mechanisms" be established to allow "affected persons" to seek and obtain correction of information that does not comply with the guidelines. Agencies would be required to report periodically to the OMB Director on the number and nature of any "complaints" received regarding the accuracy of information, and how such complaints were handled. OMB's proposed guidelines are its attempt to comply with this congressional directive.

According to the notice, the guidelines are designed to apply to a wide variety of government-wide dissemination activities, and are also generic enough to fit all media— printed, electronic, or other format. The guidelines are designed so that agencies will meet basic information quality standards. Some information is obviously more important than other information; therefore, different standards of quality are appropriate depending on the importance of the information being disseminated. OMB says it has "designed the proposed guidelines so that agencies can apply them in a common-sense and workable manner," and does not want agencies to create a whole new range of procedures to ensure data quality unless absolutely necessary. Instead, agencies should rely on existing assurance mechanisms to the extent possible.

The guidelines direct all federal agencies to develop procedures for reviewing and documenting for users the quality of information before it is disseminated. They are also to establish administrative mechanisms allowing affected persons to seek and obtain correction of information that "does not comply" with the OMB guidelines. The agencies have a year from publication of OMB's final guidelines to comply.

Some researchers are concerned about a requirement in the guidelines that any scientific results "be substantially reproducible upon independent analysis of the underlying data." Senior NIH officials are reportedly concerned that this provision could force scientists to turn over their data upon request to virtually anyone.

OMB specifically seeks comment on several aspects of the proposed guidelines:

1. The definition of the terms "quality," "utility," "objectivity," and "integrity." Unfortunately, the guidelines do not include specific definitions of any of these terms.
2. Whether the guidelines strike an appropriate balance between assuring the quality of information without creating excessive administrative burdens on agencies to assure quality.
3. Should the guidelines devote particular attention to specific types of information?
4. Should the guidelines specifically address information posted on a federal agency web page?

OMB plans to publish final guidelines by September 30, 2001.

EPD, MAC Committees Announce Plans

During the Society's strategic planning process last year it was recommended that the two major functions of the Human Resources Committee should be separate and that the Society should have an Education and Professional Development Committee and a Minority Affairs Committee.

The Education and Professional Development Committee held its first meeting in Orlando on March 31 and the Committee will be meeting again in Bethesda in September.

Major activities of the Committee include:

- Creation of a structure for the formation of student affiliate chapters of the Society.
- Creation of an inexpensive student membership category.
- Organization of a full set of sessions at each of the Society's national meetings.
- Travel awards for students and small-college faculty.
- Recommendations and data collection concerning the undergraduate major in biochemistry.
- Reorganization of educational sections of the ASBMB website.

The Education and Professional Development Committee chair is Marion O'Leary, who can be reached at moleary@csus.edu.

The goals for the Minority Affairs Committee include:

- Working to ensure that the voices of all scientists are included in society discussions and programs.
- Working to be sure that all scientists are appropriately considered for plenary lecturers and symposium organizers at ASBMB-sponsored meetings and for awards.
- Working to address issues of education, careers, and science that are of interest to scientists of all backgrounds.
- Coordinating the efforts of the ASBMB with those of other professional scientific societies.
- Reaching out to students from groups that are under-represented in science.
- Assuring that all members of the Society are well served by ASBMB activities.

The Minority Affairs Committee Chair is Phillip Ortiz who can be reached at phillip.ortiz@esc.edu.

EDUCATIONAL OPPORTUNITIES:

Time-Resolved Fluorescence Spectroscopy

The Center for Fluorescence Spectroscopy at the University of Maryland School of Medicine is offering a short course, Principles and Applications of Time-Resolved Fluorescence Spectroscopy, in Baltimore, March 25-29, 2002.

The course will cover basic and advanced topics in fluorometry, including time- and frequency-domain measurements, and Forster energy transfer. Advance topics will include chemical sensing, imaging, fiber optics, infrared fluorometry, two-photon excitation, instrumentation, confocal and multi-photon microscopy, protein fluorescence, DNA technology, high throughput screening, metal-ligand probes, correlation spectroscopy, lanthanides, and immunoassays.

For further information, schedule, and fees, contact Mary Rosenfeld at CFS, Dept. of Biochemistry and Molecular Biology, 725 W. Lombard St., Baltimore, MD 21201; phone 410-706-8409 or fax 410-706-8408; e-mail: cfs@cfs.umbi.umd.edu, or visit web site at http://cfs.umbi.umd.edu.

Meetings Calendar

Society for Advancement of Chicanos and Native Americans in Science (SACNAS)
September 27-30, 2001
Phoenix, AZ
Ph: 831/459-0170
WWW: www.sacnas.org

International Society for Interferon and Cytokine Research Annual Meeting
October 7-11, 2001
Cleveland, OH
Contact: Jane Bacha
Ph: 216/464-2055
Fx: 216/464-3884
Email: jbacha@adpro.net
WWW: www.isicr2001.org

23rd Annual Meeting American Society for Bone & Mineral Research
October 12-16, 2001
Phoenix, AZ
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, FL
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, LA
Contact: Shelly Kowalczyk
Ph: 301/294-5437
Email: skowalczyk@feddata.com
WWW:
www.tobaccocontrolconference.org

American Society for Cell Biology 41st Annual Meeting
Washington, DC
December 8-12, 2001
Ph: 301/347-9300
Fx: 301/347-93 1 0
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@biochemistryorg
WWW: www.biochemistryorg/meetings/

ASBMB Satellite Meetings:
I - Transcriptional Regulatory Mechanisms
II - Combinatorial Signaling
III- Scientific and Technical Challenges to the Human Proteome
April 19-20, 2002
New Orleans, IA
Contact: Kelly Gull
Ph: 301/530-7145
Fx: 301/571-1824
Email: kgull@asbmb.faseb.org
WWW: www.faseb.org/asbmb/

American Society for Biochemistry and Molecular Biology Annual Meeting in Conjunction with EB2002
April 20-24,2002
New Orleans, LA
Contact: EB2002 Meetings Office
Ph: 301/530-7010
Fx: 301/530-7014
Email:eb@faseb.org
WWW: www.faseb.org/meetings/eb2002

Constituent Society of FASEB
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Bethesda, Maryland 20814-3996

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