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2004 Society Award Recipients Announced

Nine Society members were selected to receive the 2004 Society Awards, including four who were named Society Fellows. The awards will be presented at the Annual Meeting on Monday, February 16, during the Awards Ceremony, to be held in the Baltimore Convention Center. The awardees are listed below and on page 2. Nominations for 2005 awards are due April 1, 2004.

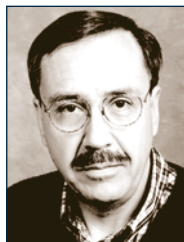
Distinguished Service Award



Mary Dicky Barkley
Case Western Reserve
University

For her many contributions to the Society as President, Representative to FASEB, Council, Executive Board, and the Public Affairs Committee.

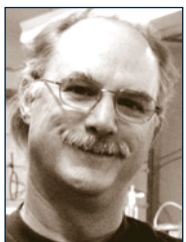
Founders Award



Carlos Bustamante
University of
California, Berkeley

For his pioneering role into the new and growing field of single-molecule biophysics.

Emily M. Gray Award



Richard D. Ludescher
Rutgers University

For promoting Biophysics to young investigators, especially through his organization of the Student Symposium at the Annual Meeting for the last several years.

Avanti Award in Lipids



Thomas J. McIntosh
Duke University
Medical Center

For major and sustained contributions to the field of membrane lipid biophysics over the course of his career.

Michael and Kate Bárány Award for Young Investigators

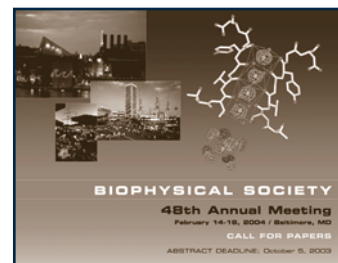


Paul R. Selvin
University Illinois, Urbana

For his development of novel biophysical techniques, especially fluorescence methods, and his important contributions in the fields of DNA dynamics, motor proteins and ion channels.

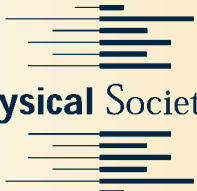
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Call for Papers in New Format



The 2004 Call for Papers will be sent to all Society members in the next few weeks. It will have a new, expanded poster format, with all forms and detailed information available online at <http://www.biophysics.org>.

The 48th Annual Meeting will take place in Baltimore, Maryland, February 14-18, 2004. Abstract submission deadline is August 5, 2003.



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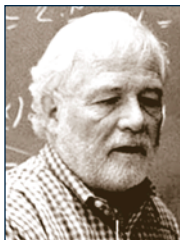
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2004 Society Fellows

Each year the Biophysical Society honors distinguished members who have demonstrated excellence in science and contributed to the expansion of the field of biophysics. Four Society members have been selected to receive this honor at the 2004 Annual Meeting.



David L. Beveridge
Wesleyan University

For his many important contributions to Biophysics that have spanned the last thirty years, in particular his development of INDO theory, studies of liquid water, and investigations into the structural basis of DNA bending.



Ronald N. McElhaney
University of Alberta

For important contributions in the area of membrane biophysics.



Mauricio Montal
University of California, San Diego

For significant contributions to the field of ion channel function.



Brian D. Sykes
University of Alberta

For distinguished contributions in nuclear magnetic resonance studies of biological systems.

Placement Service

Looking for a new position? Looking to fill a position?

- Posting candidate positions in the Placement Center is free to all Society members.
- Employers not exhibiting at the 2004 Annual Meeting pay a nominal fee of \$30 to register for the service.

For more information, visit the Biophysical Society Placement Service at <http://www.biophysics.org/placement/> or contact *Andrea Frazier* at afrazier@biophysics.org.

Biophysicist in Profile



Jill Trehwella

Jill Trehwella, currently at Los Alamos National Laboratory, may be a long way from her hometown of Gosford, Australia, but she's never lost the values of her roots.

Gosford, where she was born in 1953, was a small town, where the most exciting events were the installation of the town's first—and for a long time only—traffic light, and the switch from steam-driven to electric trains to carry passengers to “the big smoke”—Sydney.

Trehwella's father John was the local telecommunications technician and her mother Joy managed their home. Although her parents were not scientists, they influenced her in subtle ways that ultimately provided her with the tools that she finds essential to being a biophysicist, leader, mother, and a human being.

As a housewife, Trehwella's mother exemplified perfection in her occupation. She was good at all things domestic and took pride in her work. From her, Trehwella learned how important it is to see a task through until it is done correctly, which has served Trehwella well in her chosen profession. “My mother was a perfectionist,” Trehwella recounts, “and in science everything must be precise.”

Trehwella's father was on call for whenever phone service went awry in Gosford, and she often went with him

when he went to fix them. From her father, Trehwella learned to love all things technical. He also showed her that integrity and honesty were the keys to being a success.

When Trehwella began her education, she was not seeking a career in science. Influenced by her mother's love for mathematics, Trehwella aspired to be a high school math teacher. True to form, in the early 70s she received a teaching scholarship to the University of New South Wales.

Shortly thereafter, the head of the School of Physics approached her and told her she should be in the honors physics program. She was flattered and excited by this and soon dropped her teacher's scholarship, paid her bond, and changed majors.

After graduating with a bachelor's degree in math and physics in 1974, she continued at the University of New South Wales, begin-

ning graduate studies in crystallography that led to her master's degree physics.

Having married in 1974, Trehwella gave birth to her son Graham in 1976. The timing allowed her to move back to Gosford and stay at home with him for two years, which she lovingly describes as “a very beautiful time in my life.” A few years later, Trehwella moved with her family to be closer to the University of Sydney where her husband was studying for his PhD. There, she decided to go back to school and finish her own PhD, studying under *Peter Wright*, now Professor and Chair of the Department of Molecular Biology at Scripps Research Institute, and becoming his first graduate student in 1978. “Peter taught me not just to do measurements,” Trehwella fondly remembers, “but to really focus on what those measurements taught us about biological function.” He was a young professor

at the time, and she felt she was able to grow with him. His “side-by-side” work style gave her the confidence and experience that helped her career blossom. In 1980, Trehwella graduated from the University of Sydney with a doctorate in chemistry.

Realizing that Australia did not offer postdoctoral programs, Trehwella looked to opportunities in the United States to complete her education. Eager for the chance to go to a place she had previously only known through movies, Trehwella accepted a postdoctoral positioning at Yale University.

The transition, however, was not so easy. New Haven, Connecticut, was a far cry from the Hollywood images of America. Life as a postdoc in New Haven was not quite as comfortable as she had imagined, and she realized that she had been quite pampered as an Australian student. “Although it was a shock,”

Trehwella says, “it was also incredibly exciting.”

In true American fashion, she soon bought a car, learned to make chicken wings in every flavor imaginable, and truly enjoyed herself. Trehwella reflects back that, “it was a time when as scientists we could focus on friends rather than live to be ahead of the game. New Haven was a rich environment, a vibrant intellectual center.” Trehwella recounts that at Yale she and her peers fed off each other's ideas and learned from one another. “At that time there was an attitude that we were working out of a passion and love for science,” she says, “there was less stress then, than there is for young scientists today.” Her appointment ultimately led to a position at Yale University as Associate Research Scientist in 1983.

In true American fashion, she soon bought a car, learned to make chicken wings in every flavor imaginable, and truly enjoyed herself.

(Continued on page 9)

Annual Meeting Symposia and Workshop Schedule

Symposia

Sunday, February 15

8:15–10:15 AM

The Structure of Coupled Transport

Ernest M. Wright, University of California, Los Angeles, Chair
H. Ronald Kaback, University of California, Los Angeles
Nancy Carrasco, Albert Einstein Medical Center
Peter Maloney, Johns Hopkins University School of Medicine
Da-Neng Wang, New York University Medical Center

8:15–10:15 AM

Non-Classical Molecular Motors

Steven Chu, Stanford University, Chair
Kiyoshi Mizuuchi, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health
Douglas Smith, University of California, San Diego
Additional speakers to be announced.

10:45 AM–12:45 PM

Membrane Protein Folding in vivo and in vitro

J. Antoinette Killian, University of Utrecht, Chair
Donald Engelman, Yale University
Gunnar von Heijne, University of Stockholm
Ross Dalbey, Ohio State University

10:45 AM–12:45 PM

RNA Structure and Processing

Kathleen Hall, Washington University, Chair
Nancy Greenbaum, Florida State University
Samuel Butcher, University of Wisconsin
Tao Pan, University of Chicago

4:00–6:00 PM

How Hearing Happens: The Role of Molecular Motors and Ion Channels in Adaptation and Amplification by Hair Cells

A. James Hudspeth, Rockefeller University, Chair
Janet Cyr, West Virginia University
Ian Russell, University of Sussex, Brighton
Jonathan Ashmore, University College, London

4:00–6:00 PM

Protein Misfolding and Amyloidogenesis

Robert Griffin, Massachusetts Institute of Technology, Chair
Charles Glabe, University of California, Irvine
Ralf Langen, University of Southern California
JoAnne McLaurin, University of Toronto

Monday, February 16

8:15–10:15 AM

Signaling through Phospholipids and Their Metabolites

Donald Hilgemann, University of Texas Southwest Medical Center, Chair
Helen Yin, University of Texas Southwest Medical Center
Michael Czech, University of Massachusetts, Worcester
Donald Hilgemann, University of Texas Southwest Medical Center
Diomedes Logothetis, Mt. Sinai School of Medicine of New York University

8:15–10:15 AM

Protein Aggregation and Disease Pathogenesis

Paul Axelsen, University of Pennsylvania, Chair
Ron Kopito, Stanford University
Richard Morimoto, Northwestern University
Ulrich Hartl, Max Planck Institute for Biochemistry, Martinsried
Ronald Wetzel, University of Tennessee

10:45 AM–12:45 PM

Membrane Protein Structural Dynamics

Albert Beth, Vanderbilt University, Chair
Wayne Hubbell, University of California, Los Angeles
Albert Beth, Vanderbilt University
Brian Kobilka, Stanford University
Gianluigi Veglia, University of Minnesota

10:45 AM–12:45 PM

New and Notable

Organizers: *Tim Cross*, Florida State University, and *Paul Axelsen*, University of Pennsylvania

4:00–6:00 PM

Theoretical Cell Biophysics

Ken Dill, University of California, San Francisco, Chair
George Oster, University of California, Berkeley
Robijn Bruinsma, University of California, Los Angeles
L. Mahadevan, Cambridge University
Raymond Goldstein, University of Arizona

4:00–6:00 PM

Visualizing Cells and Organelles

Wolfgang Baumeister, Max Planck Institute for Biochemistry, Martinsried, Chair
X. Sunney Xie, Harvard University
Jan Ellenberg, European Molecular Biology Lab
Carolyn Larabell, University of California, San Francisco, Lawrence Berkeley National Laboratory

Tuesday, February 17

8:15–10:15 AM

Membrane Biomechanics and Mechano-Sensitive Channels

Sergei Sukharev, University of Maryland, Chair
Douglas Rees, Caltech
Robert Cantor, Dartmouth College
Evan Evans, Boston University and University of British Columbia

8:15–10:15 AM

Multi-Protein Nucleic Acid Complexes

John Bushweller, University of Virginia, Chair
Thomas A. Steitz, Yale University
Seth Darst, Rockefeller University
Cynthia Wölberger, Johns Hopkins University
Tahir Tabirov, RIKEN, Hyogo
Alan Warren, Medical Research Council

10:45 AM–12:45 PM

Awards Symposium

Yale E. Goldman, University of Pennsylvania, Society President, Chair
Mary Dickey Barkley, Case Western Reserve University
Carlos Bustamante, University of California, Berkeley
Paul R. Selvin, University of Illinois, Urbana
Thomas J. McIntosh, Duke University Medical Center

4:00–6:00 PM

Flexibility and Allostery in Signaling Proteins

Susan Taylor, University of California, San Diego, Chair
Dorothy Kern, Brandeis University
Dorothy Beckett, University of Maryland, College Park
Kathleen S. Matthews, Rice University, Wiess School of Natural Sciences
A. Keith Dunker, Washington State University
Benoit Roux, Weill Medical College of Cornell University

4:00–6:00 PM

Forces and Dynamics in the Cytoskeleton*Paul Janmey*, University of Pennsylvania, Chair*Peter Davies*, University of Pennsylvania*Michael Sheetz*, Columbia University*Elliot Elson*, Washington University*Yu-Li Wang*, University of Massachusetts Medical School**Wednesday, February 17**

8:15–10:15 AM

Functional Neuroimaging*Kamil Ugurbil*, University of Minnesota, Chair*Brian Wandell*, Stanford University*Nikos Logothetis*, Max Planck for Biological Cybernetics, Tübingen*Seiji Ogawa*, Ogawa Laboratories for Brain Function Research, Tokyo

8:15–10:15 AM

Structural Dynamics of Myosin*David Thomas*, University of Minnesota, Chair*Ivan Rayment*, University of Wisconsin*Dorit Hanein*, Burnham Institute*Christopher Berger*, University of Vermont

10:45AM–12:45 PM

Structural Views into Ligand & Voltage Channel Gating*Francisco Bezanilla*, University of California, Los Angeles, Chair*William Zagotta*, University of Washington*J. Eric Gouaux*, Columbia University*Cynthia Czajkowski*, University of Wisconsin

10:45AM–12:45 PM

Structural Basis of Viral Pathogenesis*Michael Rossmann*, Purdue University, Chair*Felix Rey*, Laboratoire de Genetique des Virus at CNRS, Gif sur Yvette*Phoebe Stewart*, Vanderbilt University*Alasdair Steven*, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health**Workshops**

All workshops will be held from 7:30–9:30 PM on both Sunday and Tuesday.

Sunday, February 15**Membranes on Solid Supports: Scientific and Nano/Technological Applications***Lukas Tamm*, University of Virginia Health Science Center, Chair*Steven Boxer*, Stanford University*Peter Fromberz*, Max Planck Institute, Martinsried*Bruce Cornell*, Ambri Pty Ltd, Chatswood*Joydeep Lahiri*, Corning, New York*Paul Cremer*, Texas A&M University*Harold Craighead*, Cornell University

General Discussion II

Applied Biocomputations*J. Andrew McCammon*, University of California, San Diego, Chair*Jianpeng Ma*, Rice University*Vijay Pande*, Stanford University*Tamar Schlick*, New York University*Ron Elber*, Cornell University*Alexander MacKerell*, University of Maryland, Baltimore County**New Technology in Site-directed Spin Labeling***Christian Altenbach*, University of California, Los Angeles, Chair*David Cafiso*, University of Virginia*Yeon-Kyun Shin*, Iowa State University*Candice S. Klug*, Medical College of Wisconsin*Sunil Saxena*, University of Pittsburgh*Bruce Robinson*, University of Washington*Christine Karim*, University of Minnesota, Minneapolis**Tuesday, February 16****Polyunsaturated Lipid Membranes***Burton Litman*, National Institutes of Health and *Kevin Keough*, Memorial University of Newfoundland, Co-chairs*Norman Salem Jr.*, National Institutes of Health*Scott Feller*, Wabash College*Klaus Gawrisch*, National Institutes of Health*Robert Cantor*, Dartmouth College and*Stephanie Tristram-Nagle*, Carnegie Mellon University, Discussants*William Stillwell*, Indiana University,

Purdue University of Indianapolis

Anthony Watts, Oxford University, Discussant**RNAi***Bryan Cullen*, Duke University, Chair*Phillip Zamore*, University of Massachusetts*Traci Hall*, National Institute of

Environmental Health Sciences

Luk van Parijs, Massachusetts Institute of Technology**Members in the News**

Robin M. Hochstrasser, University of Pennsylvania, Society member since 1990, was awarded the Benjamin Franklin Medal in the field of Chemistry.



Malcolm Irving, King's College, London, Society member since 1981, was elected a fellow by the The Royal Society.



X. Sunney Xie, Harvard University, Society member since 1992 received the 2003 Raymond and Beverly Sackler Prize in the Physical Sciences.

Subgroups

Bioenergetics

The Bioenergetics Subgroup will hold two symposia at the 2004 annual meeting. The morning symposium, organized by *James Allen*, Arizona State University Tempe, and *Edward Berry*, University of California, Berkeley, will focus on photosynthesis. It will include recent results on structural determination of prokaryotic and eukaryotic photosystems, with an emphasis on mechanisms of electron transport and the role of lipid in these large membrane complexes. The afternoon symposium, organized by *Shey-Shing Sheu*, University of Rochester, and *Kathleen Kinnally*, New York University, will cover the roles of mitochondrial ion channels in controlling the life and death of cells. These include the mitochondrial permeability transition pores in cell death, BCL-2 family proteins in synaptic transmission, mitochondrial anion channels in ROS signaling, and the mitochondrial ryanodine receptors in energy metabolism. The following is a list of the speakers and their planned presentation for each symposium:

Bioenergetics Symposium I (AM) Structural Biology of Photosynthesis

X-Ray Structure Determination of the Cyt c₂: Reaction Center Electron Transfer Complex from *Rhodobacter sphaeroides*

Herbert Axelrod, University of California, San Diego

Structure and Function of Photosystems I and II

Petra Fromme, Arizona State University

Crystallization/Structure of the Cyanobacterial Cytochrome b_f Complex: The Lipid's the Thing!

William Cramer, Purdue University

Crystallization and Structure of the Chlamydomonas Cytochrome b_f Complex

Daniel Picot, CNRS

Bioenergetics Symposium II (PM) Mitochondrial Ion Channels: Their Physiological and Pathological Relevance

The Roles of Mitochondrial Channels in Apoptosis

Kathleen Kinnally, New York University

Mitochondria and Cell Death: A Pore Man's View

Paolo Bernardi, University of Padua

Role of BCL-2 Family Proteins in Synaptic Transmission

Elizabeth Jonas, Yale University

Mitochondria as Biological Oscillators: Roles of ROS, Anion Channels and Percolation

Brian O'Rourke, Johns Hopkins University

Ryanodine Receptor 1 in Mitochondria: Transducer of Excitation-Metabolism Coupling

Shey-Shing Sheu, University of Rochester

Exocytosis and Endocytosis

Officers for the Exocytosis and Endocytosis Subgroup were elected by e-mail ballot, collected at the Biophysical Society Office. *Kevin Gillis*, University of Missouri at Columbia, will serve as the new Chair. *Manfred Lindau*, Cornell University will serve as Chair-elect. *Bob Chow*, University of Southern California, will act as past chair.

The annual Sir Bernard Katz prize for research in exocytosis and endocytosis will be awarded for the first time at the 2004 subgroup meeting.

Membrane Biophysics

Nominations for K.S. Cole Award

The subgroup welcomes nominations for the K.S. Cole award. The Cole Award is given in honor of Kenneth S. (Kacy) Cole, and it recognizes an individual who has contributed significantly to the field of membrane biophysics. The deadline for nominations is October 31, 2003. If you would like to nominate a candidate for the K.S. Cole Award, please send the nomination to a member of the Advisory Committee: *Colin Nichols*, Washington University, St. Louis; *Bob French*, University of Calgary; *Barbara Ehrlich*, Yale University; *Debbie Nelson*, University of Chicago; and *Bill Wonderlin*, West Virginia University.

—*Colin Nichols*, Chair

cnichols@cellbio.wustl.edu and
Bill Wonderlin, Secretary-Treasurer
wonder@wvu.edu

Is Your E-mail Information Correct?

Incomplete e-mail information may result in you not receiving some of the benefits your Society membership offers.

Members periodically receive e-mail reminders and Society information. Annual ballot information is also e-mailed so that members can take advantage of the online voting system.

To update your contact information, visit <http://www.biophysics.org/chgadd.htm> or contact the Society office at society@biophysics.org.

Public Affairs

Federal Appropriations Update

FY 2003 saw the completion of an extraordinary Congressional task, the doubling of the NIH budget over a short five year period. Biomedical research advanced quickly with more, and larger, federal grants. Unfortunately, that period of growth ended in FY 2004.

On June 19, the Labor/HHS Subcommittee voted along party lines, 11-7, for a 2.2% increase for the NIH. The total amount allocated would be \$27.66 billion, a \$682 million over the previous year's level. The overall Labor/HHS bill received an allocation of \$138.04 billion for discretionary spending, a \$3.68 billion increase, just short of a 3% increase.

While some members of the committee objected to the small funding levels, full Appropriations Chairman C. W. Bill Young (R-FL) said that due to one-time costs in FY 2003, the real NIH increase is "more than 7%," not the 2.2% being reported. One of the loudest voices objecting to the allotment was Ranking Minority Member David Obey (D-WI) who said that the NIH growth "is now coming to a screeching halt. This will not be able to provide even a 3% increase, and that won't even keep up with inflation in the healthcare field. NIH says this will produce an increase of just 0.2% in the number of each new and competing research grants."

Almost a week later, the Senate Labor/HHS Appropriations Subcommittee voted a \$1 billion increase for the NIH, a 3.71% increase to \$27.66 billion for FY 2004. On the same day as the Senate mark-up, June 25, the full House Appropriations Committee agreed to its Subcommittee's mark-up of 2.2%.

(Continued on page 8.)

Bridging the Sciences

In April, the Biophysical Society helped form a new coalition called "The Bridging the Sciences Coalition." This public affairs initiative's goal is to help decision-makers in the Congress and the Administration find mechanisms to fund research at the interface of the biological and physical sciences.

With the help of former U.S. Representative *John E. Porter*, the coalition has met with the White House's Office of Science and Technology Policy and the Department of Energy's Office of Science. Additionally, coalition partners have had personal discussions with NIH Director *Rita Colwell* and NIH Director *Elias Zerhouni*. All of these scientists have been pleased that their peers have approached the government with the beginnings of a plan to "bridge" science research.

More encouraging news is that Porter organized a meeting with current U.S. House Appropriations Sub-committee Chair *Ralph Regula* (R-OH) securing report language in the Congressional Record directing Congress to address the issue of "bridging" the sciences. The full report can be found at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_cong_reports&docid=f:hr188.108.pdf. The language for this section is located on page 94.

Coalition members currently include the American Society of Biochemistry and Molecular Biology, the American Peptide Society, the Protein Society, the American Physical Society, the American Physiological Society, the International Society for Computational Biology, and the Biophysical Society.



From left to right: Mary Barkley and Ken Dill, Biophysical Society Public Affairs Committee Co-Chairs, Katie Olsen, Associate Director, The White House Office of Science Technology Policy, and former U.S. Representative John Porter, meeting about the Bridging the Sciences initiative.

(Continued from page 7.)

Senators *Arlen Specter* (R-PA) and *Tom Harkin* (D-IA) said they were working with House Appropriations Chairman *Ralph Regula* (R-OH) to conference the bill early to avoid a repeat of last year's budgetary extensions. Specter and Harkin claim that removing one-time funding increase in FY 2003 would actually mean an 8% increase for the NIH in FY 2004.

The biomedical research community has already begun to send messages to Congress urging it to continue the funding increases.

PLOS and Journal Publications

A group calling itself the Public Library of Science (PLOS), held a press conference on June 26 announcing its objective to create an "open system" of scientific publishing. The PLOS has engaged Minnesota Democrat *Martin Olav Sabo* in its effort. Sabo has offered a House bill entitled the "Public Access to Science Act."

PLOS received a \$9 million grant from the Gordon and Betty Moore Foundation, to establish an on-line, peer-reviewed journal on biology. Journal access will be free, although the operating expenses, paid by the journal's published authors through a \$1,500 per manuscript fee, will shift costs for publications from libraries to authors.

NSF

The Government and Results Act of 1993, known as GRPA, requires all federal agencies to update their strategic plan every three years. In an open letter, NSF Director Rita Colwell invites public comments of the agency's updated plan that reviews the goals through 2006.

The preface of the plan states that "the NSF plays a critical role in supporting fundamental research, education and infrastructure at colleges, uni-

versities, and other institutions throughout the country." It continues with exceptional examples of NSF-funded research that have helped advance scientific understanding. Other components of the strategic plan explain aspects of the NSF, such as the National Science Board, the NSF's policymaking body that serves as an adviser to the President and Congress on matters related to science and engineering research and education.

For the entire plan, visit www.nsf.gov/od/stratplan_03-08/draft-stratplan.htm

Round-Up

Senate Nanotechnology Bill Heads to Floor: In May, the House passed legislation funding nanotechnology legislation. The Senate is set to pass a similar bill authorizing research for \$4.7 billion. Senate leaders on the issue, Ron Wyden (D-OR), George Allen (R-VA), John McCain (R-AZ) and Ernest Hollings (D-SC), have worked out the details so their version is almost identical to the House bill, making conference committee negotiations much easier.

Domenici Holds Hearings on DoE Lab Management: In a more subdued announcement, Senate Energy and Natural Resources Committee Chairman Pete Domenici (R-NM) is looking into the Department of Energy's national laboratories. "My committee is holding these hearings to explore DOE lab management as a whole and to address specific issues that need to be considered as DOE prepares to compete management contracts for the Los Alamos lab, and eventually, the Lawrence-Livermore lab." More hearing are scheduled in July.

GAO Reviews Request for VA Human Subjects Research: The House Veterans Affairs Oversight and Investigations Subcommittee is looking into human subjects protections programs, basic management systems and personnel creden-

tialing processes at the Veterans Health Administration. The review comes after a January report of research misconduct at an Albany, NY, VA medical facility where data falsification was suspected. The VA recently had its Office of Research Compliance and Assurance (ORCA) dissolved for its failure to properly review such situations. However, VA Oversight Subcommittee Chairman Steve Buyer (R-IN) is interested in resurrecting ORCA and has introduced H.R. 1585 to "establish an office to oversee research compliance and assurance" within the VA.

Opportunities

Human Frontier Science Program

Call for applications for Long-Term fellowships. The new guidelines for the 2004 Long-Term Fellowship awards are now available. The web site for online submission is currently being modified and will be available by the end of June/beginning of July. In the meantime, the guidelines can be downloaded at http://www.hfsp.org/how/appl_forms_LTF.htm?group=How. Information about the review procedure is available at <http://www.hfsp.org/how/ReviewProc.php?group=How>

New this year: A host supervisor may now sponsor only ONE candidate in a given award round.

U. S. Fulbright Scholar Program

The 2004-2005 Fulbright Scholar grant opportunities information can be found at http://www.iie.org/FulbrightTemplate.cfm?Section=U_S_Student_Program.

The deadline for traditional lecturing and research awards is August 1, 2003. Other deadlines are in effect for special programs.

(Continued from page 3.)

Trewhella's research at Yale was in the frontier area of using neutron diffraction to study a membrane protein called bacteriorhodopsin, which captures light and pumps protons across the organism's membrane to create an electro-chemical potential. "It was in the running to be the first membrane protein structure to be solved," she recalls. "History proved it to be a harder structure to solve than anticipated, but we still learned a great deal about membrane proteins and how they sit inside membranes." Although the final results were not what she had hoped for, she was able to implement the skills she had gained in Wright's lab and see a project from conception to the end.

In 1984 she was asked to come to Los Alamos National Laboratory to launch a biological neutron scattering program. With her indomitable energy, she packed up seven-year-old Graham and headed cross-country.

Trewhella started by helping to build a neutron spectrometer, but quickly branched out into using neutrons to study biological structures. *John C. Browne*, head of the Physics division at the time, recalls that he met Trewhella as a new biophysicist staff member, and "Jill's enthusiasm and passion for science bubbled out during our very first meeting."

"Much of my success is due in part to good timing and the support of colleagues and friends—both male and female," Trewhella states. And Los Alamos provided an equally supportive environment. She was amazed at how welcome she felt when she first arrived, and recounts that the wife of a fellow

scientist offered to take care of Graham when Trewhella needed to be away on business or at meetings. As a result of the family-like atmosphere, she never felt that obstacles were insurmountable. "It also helps when your employer has a goal and you understand what that goal is," she explains, "from the beginning, it was a match."

Trewhella did, however, have a vision not shared by all her colleagues. She participated in and also led a few groups of scientists who believed that there was a national need to create a

At the time, no one envisioned that the anthrax letters would make bioterrorism the topic that put Los Alamos stage center as the national media sought to find out "who done it."

multidisciplinary bioscience division, one which would leap across the boundaries of individual disciplines and combine biology, chemistry, physics, and computational science.

After eight persistent years, she saw her vision realized. She received a phone call from Deputy Laboratory Director *Bill Press* one Saturday afternoon asking her to lead the new multidisciplinary Bioscience Division that she had helped to form. Trewhella ecstatically accepted, under the condition that she be considered as a candidate for the permanent position. Her condition was quickly accepted and on January 26, 2000, Laboratory Director Browne named her Director of the Bioscience Division. "Jill is one of those unique scientists who come along only about once every decade," Browne says, "who combine their passion for science with their excellence in research and their leadership skills to make a true difference in an organization."

As director, Trewhella has grown the division by steering it toward new programs in the national security arena, in particular in the area of defense against chemical and biological agents—be they

naturally emerging or man-made. Specifically, she has brought to the fore efforts in microbial forensics, detection and characterization of pathogens and chemical agents, and the science that will provide the next generation technologies to protect public health and prevent the proliferation of biological and chemical agents as weapons. She explains that working in the national labs, and in the Bioscience Division, is more about the team and not just the individual. Peer collaboration is a strength of the environment. Teaming is critical to the Division's ambitious goals, "which aim to break through unknown territory and bring advances in the understanding of and new technology solutions to the problems faced in national security, stewardship of our environment, and protection of public health."

Because of her leadership role at Los Alamos and her multidisciplinary background, Trewhella has been consulted by political officials, agency heads, and even the media. After 9/11, but before the anthrax-laced letters in the US mail, she was designated the lab's spokesperson on all matters relating to bioterrorism. At the time, no one envisioned that the anthrax letters would make bioterrorism the topic that put Los Alamos stage center as the national media sought to find out "who done it."

For a short period, Trewhella was in the media hot seat, endeavoring to be a knowledgeable voice of calm both for her local community and when thrust into the national limelight. Everyone wanted to know how to clean up the anthrax spores and how microbial forensics could help locate the origin of the letters and even the person who was responsible. "This was a huge challenge and a time of much hype and exaggeration," she explains. "I was proud when I spoke to *Tom Ridge* about the anthrax

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letters, and told him that we might not be able to solve the problem. As scientists, especially at the national labs where we provide the technical advice that will form the basis of policy or government action,” Trewhella continues, “we must tell the truth—even if the media and the politicians sometimes would like a different answer. Tom Ridge, I should add, was appreciative of my frankness.”

When *President Bush* was seeking support for his new Department of Homeland Security, Trewhella was asked to brief him on some of the technologies that the national labs had to defend against bioterrorism. Governor Ridge, Speaker *Dennis Hastert*, and Secretary of Energy *Spencer Abraham* were also at that meeting. Trewhella was impressed by the fact that the President took the time to first introduce her to

ored when he listened intently as she explained the relationship between the sequencing power that the Human Genome Project gave us, and our ability to detect pathogens with DNA signatures and to do microbial forensics.

The researchers of Los Alamos Bioscience Division have also been asked to perform testing on possible biological and chemical weapons from Iraq and other nations threatening national security. Trewhella explains that when working with a domestic case, researchers can be limited by a need to follow “evidentiary rules” because law enforcement agencies are looking to prosecute criminal activity. However, when dealing with international cases, “we have the opportunity to push more on the frontiers of new

like they are in the world of science than the world of courts.”

In addition to leading the Bioscience Division, Trewhella has pursued her personal research as the principal investigator on a project called *Structural Changes in Signaling in Calcium Regulation*, for the National Institutes of

Health. The project aims to understand the structural molecular biology of Ca^{2+} -dependent signaling. She has also been collaborating with the

“Regardless of what your politics are,” she says, “there is something very memorable about being in the presence of the most powerful man in the country.”

Oak Ridge Structural Biology Center in developing new applications for neutron scattering in structural biology. Other projects her research team is working on include *Structure and Dynamics of Protein Kinase A (PKA) Signaling Complexes*, which hopes to characterize the structures of different isoforms of PKA in order to understand how enzyme regulation and targeting within the cell is achieved.

Besides her work at Los Alamos, she has been very active in her service to the Biophysical Society. *Sig Hecker*, Senior Fellow at Los Alamos, describes Trewhella as a “bundle of energy.... always looking to take on extra responsibility,” which she certainly did with the Society. A member since 1982, she has served as Secretary since 1999, as well as on the Executive Board and Council. She was Chair of the Publications Committee and is now on the Editorial Board of the *Biophysical Journal*, and has been a member of several other committees including the Finance, Membership, Operations, and Public Affairs committees.

“The Society chose me,” she states. “Less than six months after I started at Yale, I went to my first Biophysical



Trewhella (r) briefing President George W. Bush, Speaker Dennis Hastert and Secretary of Energy Spencer Abraham (Tom Ridge is hidden from view.)

everyone in the room. “Regardless of what your politics are,” she says, “there is something very memorable about being in the presence of the most powerful man in the country.” She felt hon-

methods and technology and the credibility of the results is evaluated differently than it is in a court of law,” she explains. “Standards and quality are still critical, but they are established more

Society meeting in Boston, “ she recalls. “I got off the elevator and *Emily Gray* (then Executive Director) was standing there and said, ‘hello’. The Society made me feel welcome and Emily exemplified it,” said Trehwella. The next year she presented a paper, and eventually *Clare Woodward* nominated Trehwella for Council. Trehwella feels much has changed in the Society since those days, certainly the size. When she joined, the Society had little over 3000 members, and it now has grown to nearly 7,000. While Trehwella feels it is harder to get to know individual scientists, she stresses that the growth bodes well for the field of biophysics. “It grew from a mom-and-pop Society to something much larger and more professional,” Trehwella explains. “The Biophysical

Society stewards the future of biophysics—it sits at the confluence of the biological, physical and computational sciences and defines one of the most exciting frontiers for 21st century science,” Trehwella states. “The Society has also given me a rich set of collaborators, some of whom I have worked with for close to two decades.”

There is, however, life outside of the lab and the Biophysical Society. Trehwella, married since 1991 to *Don Parkin*, who leads the Center for Integrated Nanotechnologies at Los

“The Biophysical Society stewards the future of biophysics—it sits at the confluence of the biological, physical and computational sciences and defines one of the most exciting frontiers for 21st century science.”

Alamos, enjoys the outdoors. In their spare time they love to ski, and she likes to visit her mother and other extended family in Australia.

Trehwella enjoys all genres of music, a love she inherited from her father, and is trained in classical piano. Her next career, she says, will be as a writer. It seems she has already begun—she won an essay competition when she and Parkin co-authored a short science fiction story called *A Day in the World Science Alliance* published in *Science* as part of their “Visions of the Future” series that celebrated the close of the 20th Century and looked to imagine the world of science circa 2050.

While she says that developing the Bioscience Division at Los Alamos has been her most challenging accomplishment and one she is proud of, her greatest achievement, she admits, has been raising a successful son. Graham, now 27, works for IBM in New York. “It is wonderful to see him living and working independently in his own space,” she says. “He thinks about politics and making the world a better place – and he’s an artist at heart.” Being Graham’s mother, Trehwella proudly admits, “is her most rewarding job.”

Trehwella offers this advice to young scientists: “know that the possibilities are limitless. The best way to be successful is to do the things you love. Science is a demanding master...your integrity must be impeccable but you should enjoy what you do.” Far from her childhood home, she has held fast to her parents’ values and made them her own. “Twenty years later,” says Browne, “she still has that spark in her eyes...I expect Jill will be a strong voice for bioscience for many years to come.”

Upcoming Events

August 17-21, 2003

PharmaConference 2003 on Transporters and Drugs
Pontresina/Engadin, Switzerland

<http://www.pharmaconference.org/welcome.htm>

September 14–26, 2003

*Eighth International Summer School on Biophysics:
Supramolecular Structure and Function*
Rovinj, Croatia

<http://www.irb.hr/biophysics2003>

October 2–5, 2003

SACNAS 30th National Conference
Albuquerque, NM

<http://www.sacnas.org>

October 14–18, 2003

International Meeting on Applied Physics
Badajoz, Spain

<http://www.formatex.org/aphys2003/aphys2003.htm>

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