

Call for 2011 Thematic Meeting Topics

Each fall, the Biophysical Society sponsors small focused-topic meetings that are organized by Society members. The Society provides partial financial support in the range of \$10,000-\$20,000, in addition to complete meeting management, including all web and onsite components.

In 2010, the Society is sponsoring two meetings: one in Beijing, China, October 10-13, on *New Horizons in Calcium Signaling*, and a second in Singapore, November 9-12, on *Actin, the Cytoskeleton, and the Nucleus*.

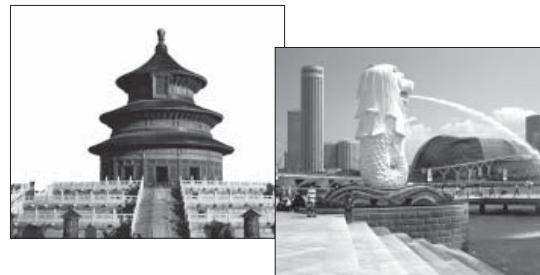
The Society is now calling for proposals for 2011 meetings. Biophysical Society thematic and discussion meetings have in the past been held in Airlie, Virginia, and Asilomar, California, but now other venues, including outside the US, are considered.

All complete submissions will be considered by the Thematic Meetings Committee, and the Committee's recommendations will be submitted to the Society's Executive Board for approval in the spring of 2010.

Call for Society Award Nominations

**Submission Deadline
May 1, 2010**

The Biophysical Society honors its members and recognizes excellence in biophysics each year by offering Society Awards in nine different categories. For more information about the Society Awards visit www.biophysics.org.



Criteria for meetings sponsored by the Biophysical Society:

- Organizers must be Society members.
- Topics must be timely, not recently addressed, and should foster interdisciplinary and international research.
- Speakers must present new and exciting research.
- The proposed list of speakers must represent geographic, gender, and ethnic diversity.
- Complete submission must include names of the organizers, meeting title, reason why the meeting should be held in 2011, description of the topics that will be presented, a list of proposed speakers, the proposed location, and a proposed budget that includes federal agencies and commercial firms the organizers plan to solicit for financial support.

Proposals must be submitted through the onsite submission site at <http://www.surveymonkey.com/s/TYP8Z29> for consideration.

Submission deadline for proposals for 2011 meetings is March 30, 2010.

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The Biophysical Society Newsletter (ISSN 0006-3495) is published twelve times per year, January-December, by the Biophysical Society, 9650 Rockville Pike, Bethesda, Maryland 20814-3998. Distributed to USA members and other countries at no cost. Canadian GST No. 898477062. Postmaster: Send address changes to Biophysical Society, 9650 Rockville Pike, Bethesda, MD 20814-3998. Copyright © 2010 by the Biophysical Society. Printed in the United States of America. All rights reserved.



Biophysicist in Profile

Peter Moore

“A lot of what happens to people happens as a result of chance, and it pays to be lucky,” says Peter Bartlett Moore, Sterling Professor of Chemistry, with joint appointment in the Department of Biophysics and Biochemistry, at Yale University.

Moore gained an early appreciation of biology from his father, who was professor of surgery at Harvard University and ran the surgical services at Peter Bent Bingham Hospital. Two high school teachers, one who taught mathematics and another who taught chemistry and astronomy, steered him in a more physical direction.

After completing his undergraduate degree at Yale, Moore opted, “for no terribly good reason,” to get his graduate training in biophysics at Harvard University. It was a fortuitous move, as his research supervisor was *James Watson*, famed for his double helix work. At Watson’s suggestion, Moore started working on ribosomes, which became the focus of most of his career.

For Moore’s postdoc work, Watson pointed him toward the University of Geneva, and then the Medical Research Council (MRC) Laboratory of Molecular Biology at Cambridge. As a result of this providential move, in the laboratory of *H. E. Huxley* he started working in the area now known as “structural biology.”

Moore considers his appointment at Yale in 1969 another bit of “dumb luck.” When he left Yale as a student, he did not consider the department a desirable place to work. By the time he entered the job market, though, it had been totally restructured and had become “a very attractive place” for the young scientist.

Throughout his early career, Moore often seemed to be in the right places at the right times. “For scientists of my generation who got trained in well-established laboratories, the path forward was remarkably smooth.” Jobs were plentiful as university science programs expanded, and NIH funded beginners “so they could show what they were made of,” he says. “I wish it were so easy for my younger colleagues today.”

His Yale colleague, *Donald Engelman*, debunks Moore’s Contention that his success is purely attributable to luck, noting that Moore commits himself fully to making the best of a given opportunity. Their 1971 lunch chat idea about applying neutron scattering to map and triangulate proteins of the ribosome resulted in more than 15 years of an “amazing series of scientific adventures, about twenty co-authored papers, and a map of the small ribosomal subunit.”

Moore has pursued several kinds of research over his career, including standard biochemistry/molecular biology in the early days, electron microscopy at Cambridge, and neutron scattering soon after starting at Yale. Around 1980,

he took a sabbatical to learn nuclear magnetic resonance (NMR), which his group pursued until recently. Around 1990, he says, he became increasingly involved in X-ray crystallography. His research interests include the structure and function of macromolecular assemblies, RNA structure and function, and ribosomes.

For Moore, the most significant development with which he was involved was—in collaboration with *Thomas Steitz* (Chemistry Nobel Prize, 2009)—determination of the crystal structure of the large ribosomal subunit from *Haloarcula marismortui* in 2000. “The work we have done with this structure since has shed a great deal of light on how antibiotics work, and may well lead to the development of new ones.”

“Peter is unusual in the breadth of techniques which he has used,” says *Donald Crothers*, Sterling Professor Emeritus and Senior Research Associate in the Yale Department of Chemistry, and chair of the department when Moore was selected in 1969. “Peter was not one who just learned to set the dials on the machine. Rather, he insisted on understanding his techniques at the most fundamental level. He insists on working on problems of major biological significance, but he brings an unusual depth of understanding of physics to his work. It has been an honor for me to serve beside this scientist of impeccable quality standards.”

Applying those standards makes Moore appear intimidating to some people, says *Hong Jin*, who earned her PhD with Moore and is now an NIH fellow in *Venki Ramakrishnan’s* lab in the MRC Laboratory of Molecular Biology at Cambridge. “Peter is a mentor [who] brought me to the very forefront of scientific research and taught me to practice and promote good science. He is extremely honest and sharp in expressing his scientific opinions,” which intimidates some, says Jin, yet “he is the most gentlemanly gentleman I have ever known. Intimidated or not, everyone I know salutes his brain power and his professionalism.”

Moore will retire from the faculty at Yale in a few months, allowing him time to pur-

sue a couple of major writing projects. He also looks forward to traveling with his wife, *Margaret S. Murphy*, whom he met while he was a graduate student in Watson’s group at Harvard and she a technician helping Walter Gilbert look for the lac repressor. “Since then, she has been the one raising the children and keeping me going.”

They have two children; daughter Catherine who helps manage the health insurance system for Massachusetts state employees and, with her husband’s help, raises two small sons, and a son Philip who works in financial management.

As the new President of the Biophysical Society, Moore recognizes that only minor course changes are possible in a one-year term, so he will likely focus on one issue. “I think it would be useful if the Society, collectively, began thinking about how biological research should be organized and funded over the next few decades,” he says. “In my view, the current system, which has its origins in decisions made in the 1940s, isn’t working well anymore. It is training new scientists faster than it is creating jobs ... Like it or not, the system is going to change. I think it would be a good thing for all of us if the Society were to have a seat at the table where relevant decisions get made. I intend to get this discussion started over the next 12 months.”

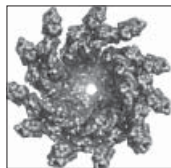


Moore spending time on the water fishing (above) and teaching his grandson how to drive the boat (left).

Biophysical Journal

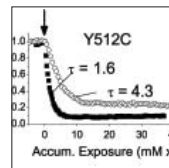
Highlighted Papers

Below is a list of highlighted papers that appeared in the February 3, 2010, issue of the *Biophysical Journal*. Associate Editors of the *Journal* select papers from each issue to be highlighted on the website. Visit www.biophysj.org to view these and the latest highlighted papers. Highlighted papers are free to all viewers until the next issue releases.



A Repulsive Electrostatic Mechanism for Protein Export through the Type III Secretion Apparatus

Thenmalarchelvi Rathinavelan, Lingling Zhang, Wendy L. Picking, David D. Weis, Roberto N. De Guzman, and Wonpil Im



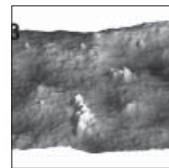
Accessibility of the CLC-0 Pore to Charged Methanesulfonate Reagents

Xiao-Dong Zhang, Wei-Ping Yu, and Tsung-Yu Chen



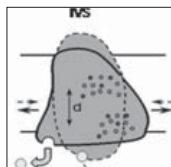
Solution Structures of Rat Amylin Peptide: Simulation, Theory, and Experiment

Allam S. Reddy, Lu Wang, Yu-Shan Lin, Yun Ling, Manan Chopra, Martin T. Zanni, James L. Skinner, and Juan J. De Pablo



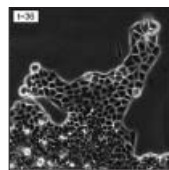
Single Protein Molecule Mapping with Magnetic Atomic Force Microscopy

Andriy V. Moskalenko, Polina L. Yarova, Sergey N. Gordeev, and Sergey V. Smirnov



Conformational State-Dependent Anion Binding in Prestin: Evidence for Allosteric Modulation

Lei Song and Joseph Santos-Sacchi



Physical Model of the Dynamic Instability in an Expanding Cell Culture

Shirley Mark, Roie Shlomovitz, Nir S. Gov, Mathieu Poujade, Erwan Grasland-Mongrain, and Pascal Silber

Public Affairs

Science and Engineering Indicators 2010

The National Science Board released *Science and Engineering Indicators 2010* (SEI) on January 15 at the White House. Produced biennially, SEI is a policy-neutral document mandated by statute that provides statistical data on important questions for US science and engineering (S&E) policy: What are the major changes in the world's S&E enterprise, and how do they affect the United States? How do Americans in S&E jobs fare at a time of economic challenge? And how do American views about science and engineering and issues such as the environment, climate change, and stem cells compare with the views held by others around the world? The SEI and the accompanying 2010 Digest are available at: <http://www.nsf.gov/nsb/>.

Biosecurity Report Released

The federal Working Group on Strengthening the Biosecurity of the United States released a report and recommendations in January, nearly one year after an Executive Order tasked the trans-agency task force with examining federal policy related to “facilities that possess biological select agents and toxins.” To strengthen biosecurity, the group made the following recommendations:

- Perform a risk assessment for each of the 82 biological select agents and toxins [BSAT] on the BSAT list and develop a stratification scheme so that security measures may be implemented based upon risk.
- Enhance US Government coordination of oversight and inspections as well as institutional implementation, compliance, oversight, and accountability.

- Provide comprehensive guidance on inventory management and record-keeping requirements, approaches, and templates.
- Enhance the Security Risk Assessment at the Federal level to allow for improved vetting of US citizens and foreign nationals. Require continuous monitoring measures at the local level.
- Develop a set of minimum prescriptive security standards based on the risk at the lowest level, allowing for enhancements as risk increases.
- Perform a risk assessment, focused on the security of BSAT transportation under the current regulatory framework, to determine if any risk is present during BSAT transportation.

The Working Group was chaired by officials from the US Department of Health and Human Services and the US Department of Defense and included representatives from a broad range of Federal agencies that have responsibility for various aspects of the research on and security of biological select agents and toxins.

To view the report, go to <http://www.hhs.gov/aspr/omsph/biosecurity/biosecurity-report.pdf>.

2010 Biophysical Society Bloggers

Thank you to our four BPS Bloggers for taking the 54th Annual Meeting to the blogosphere! Couldn't make it to the Meeting? Find out what you missed! Go to <http://www.biophysics.org/Default.aspx?alias=www.biophysics.org/2010meeting> and check out these bloggers' perspectives.

Want to volunteer to bring hands-on learning to your area?

Join the National Lab Day online community and share your expertise with local students!



National Lab Day is a nationwide initiative to ongoing collaborations among volunteers, students and educators. By going to www.nationallabday.org or clicking on the link on the Society website, you can search requests for volunteers from the science community by geographic area and scientific discipline to find a group that needs your help. There may be a local science fair that needs judges, or a classroom teacher that wants help with an experiment down the street from your lab. You can also sign up as a scientist and indicate how you can help so that teachers looking for assistance will find you when they search the site.

The Biophysical Society encourages you to sign up. By volunteering, you can work together with educators and students to improve labs and discovery-based science experiences for students in grades 6-12. While National Lab Day opportunities are ongoing, there will be a week-long celebration of this new collaboration with activities across the country in May 2010.

Grants and Opportunities

Name: National Medal of Science

Objective: To award individuals “deserving of special recognition by reason of their outstanding contributions to the knowledge in the physical, biological, mathematical, or engineering sciences.”

Who May Apply: Open to all US citizens or permanent residents who have applied for citizenship within the past 12 months.

Submission Deadline: March 31, 2010

Web Link: <http://www.nsf.gov/od/nms/medal.jsp>

Members in the News



Xiaoliang Sunney Xie of Harvard University and Society member since 1992 received the 2009 E.O. Lawrence Award in Chemistry from the US Department of Energy.



Udayan Mohanty of Boston College and Society member since 1995 received the 2009-2010 John Simon Guggenheim Memorial Foundation Fellowship.

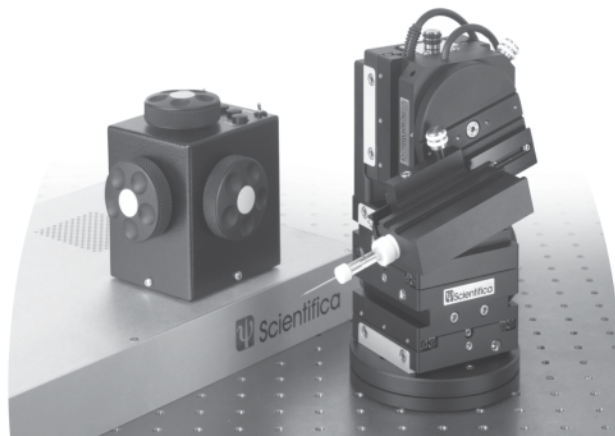
Society Job Board

Looking for a job in biophysics? Have a job opening in biophysics?

The Biophysical Society Job Board is a great place to find the latest jobs in biophysics. Job Seekers may post their résumé for free. Employers can post a job and gain access to over 500 résumés of candidates who specialize in biophysics.

Visit www.biophysics.org and click on "Career Center" today.

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Biophysical Society Newsletter—March 2010

Upcoming Events

May 7–8, 2010

Calcium Signals in Sensory Processing 2010

Goettingen, Germany

www.sensory-calcium-signaling.uni-goettingen.de

June 27–July 2, 2010

55th Annual Meeting of the Health Physics Society

Salt Lake City, Utah

<http://www.hps.org>

June 3–4, 2010

3rd European Workshop on Lipid Mediators

Paris, France

<http://workshop-lipid.eu>

October 10–13, 2010

New Horizons in Calcium Signaling

Beijing, China

<http://www.biophysics.org/2010china>

November 9–12, 2010

Actin, the Cytoskeleton, and the Nucleus.

Singapore

www.biophysics.org

November 12–14, 2010

Frontiers in the Simulation of Macromolecules

Los Angeles, California

<http://michele.usc.edu/FSM2010/>

Please visit <http://www.biophysics.org> for a complete list of upcoming events.