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Six Society Fellows Announced

Each year the Biophysical Society honors distinguished members who have demonstrated excellence in science and contributed to the expansion of the field of biophysics. By naming them Fellows, the Society has this year chosen six members for this honor. They are listed below. The awards will be presented at the 2006 Annual Meeting Awards Ceremony in Salt Lake City, on Monday February 20.



Michael Bárány

University of Illinois
College of Medicine

For his significant advances to the knowledge of the molecular nature of contractility.



Yale Goldman

University of Pennsylvania

For his leading research in the area of myosin-based motility and studies of the muscle, using experiments distinguished by the use of very clever, unique apparatus, all home built, and novel experimental paradigms.



Martin Gruebele

University of Illinois,
Urbana

For his significant contributions to the fields of fast protein folding dynamics and kinetics.



M. Thomas Record

University of Wisconsin,
Madison

For his important contributions to the study of the biophysics of nucleic acids and their interactions with ligands and proteins.



J. Walter Woodbury

University of Utah
Medical School

For his considerable contribution to the study of ion channel function.



Xiaoling Sunney Xie

Harvard University

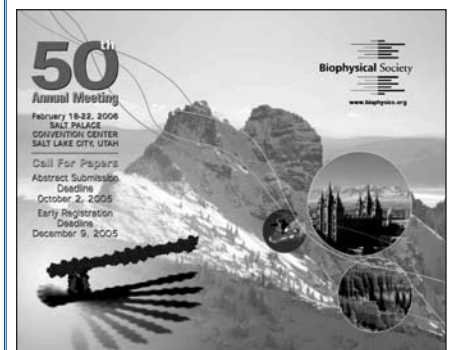
For his significant contributions to single-molecule biophysics and cellular imaging.

50th Annual Meeting Call for Papers

The 2006 Call for Papers, in its expanded poster format, has been mailed to all Society members. All forms and detailed information is available online at:

<http://www.biophysics.org>

The 50th Annual Meeting will take place in Salt Lake City, Utah, February 18–22, 2006. The abstract deadline is October 2, 2005.





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Treasurer's Report



Mordecai Blaustein

The Biophysical Society continues to grow stronger and remain fiscally healthy. The most recent audit, of fiscal year ending 2004, showed the Society with net operating revenues of \$418,589. The strong financial showing reflected strength and growth in all areas: membership, annual meeting, journal, and reserves interest and dividends.

The 2004 Annual Meeting, which was held in Baltimore, Maryland, witnessed a record number of attendees, 6,100. As has always been true, if the Annual Meeting does well, membership

grows. At the end of 2004, Society membership had grown to 7,519.

Additionally, in 2004 the Biophysical Journal took steps to reduce its printing costs by instituting tiered page charges. The results have been positive, with BJ showing more than \$200,000 in net profits.

Interest rates, which had in 2003 been barely existent, increased in 2004 so that reserves interest and dividends income added \$105,567 to the Society's income.

The Society's reserves, which are now managed by Paul Powers of Smith Barney, increased 7.5% during the past year. That performance places the Society's portfolio among the top 10% performers for the year.

Overall, the Society had net assets of \$3,258,955 at the end of FYE 2004, a \$409,098 increase in net assets over FYE 2003.

It's important for members to understand that the Society has for the past seven years operated under the budgeting guidelines described below. These guidelines were formulated in part to ensure that no one Society activity was burdened with supporting the bulk of other Society activities.

7-Year Highlights

FYE Audited Financial Positions on June 30th

(in thousands)

	1998	1999	2000	2001	2002	2003	2004
Net Revenues	\$2,467	\$3,005	\$3,287	\$3,457	\$3,469	\$3,411	\$4,087
Net Expenses	\$2,572	\$2,716	\$2,811	\$2,811	\$3,398	\$3,323	\$3,669
Income/Loss	-\$105	\$289	\$476	\$646	\$71	\$88	\$418
Investment Acct	\$1,566	\$1,779	\$2,063	\$2,151	\$2,335	\$2,592	\$2,981

FYE 2004 Audit by Activity Centers

Centers	
Annual Meeting	
Revenue	\$1,333,220
Expenses	940,947
Net	392,273
Biophysical Journal	
Revenue	1,805,517
Expenses	1,566,896
Net	238,621
Membership Services	
Revenue	843,663
Expenses	1,161,535
Net	-317,872
Reserve Income	
Revenue	105,567
Total Revenue	4,087,967
Total Expenses	3,669,378
Total Net Revenue	\$418,589

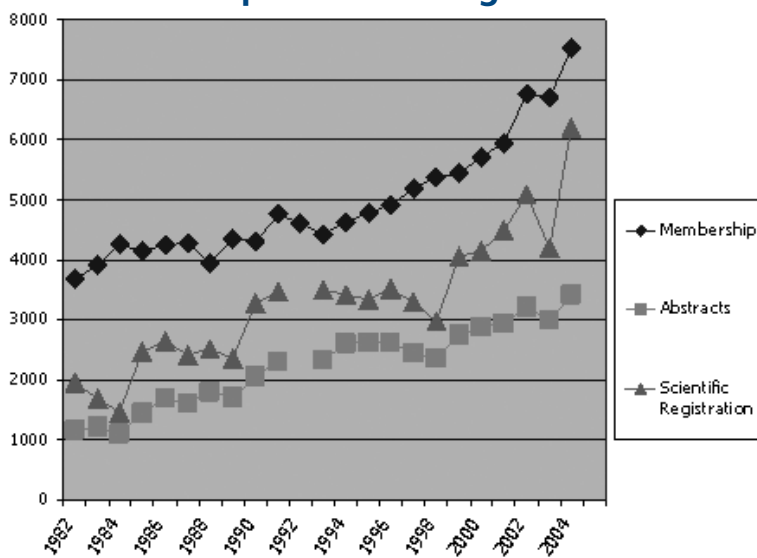
- ◆ The Annual Meeting should generate each year a profit equivalent to 10% of annual expense.
- ◆ The Biophysical Journal should generate each year a profit equivalent to 10% of its annual expenses.

◆ The yearly budget for Membership Services (all other committees and centers) should consist of membership dues, 10% Journal profit, 10% Annual Meeting profit, and member contributions.

◆ At least one half of net operating revenue each year goes to reserves until reserves reach one-year's operating budget level. Reserves level is currently at approximately 75% of that goal.

Many outside forces can impact a society. Annual meetings are affected by site, world events, weather, and NIH funding. Journals are affected by open access, reduction in library budgets, and increased costs from growth in submissions. Membership is always affected by funding and dependent on renewals and growth in areas of scientific research. The Council and Board continue to believe that the current budgeting philosophy will allow the Society to be more flexible and less vulnerable to changing landscapes in funding, annual meetings, publications, and membership trends.

Membership and Meetings Trends



Molecular Motors: Point Counterpoint

BIOPHYSICAL SOCIETY
DISCUSSIONS MEETING
OCTOBER 19–21, 2006
ASILOMAR, CALIFORNIA

The Discussions are small meetings that focus on a cutting-edge or emerging topics in biophysics, topics that benefit from intense discussions. The meetings are patterned after the Faraday Society and have a unique format that stresses discussion over formal presentations. Plenary sessions consist of five-minute presentations by speakers, followed by a lengthy discussion. In addition there are poster sessions. This format allows for greater, less-inhibited participation by participants. Discussions meetings are limited to 150–200 participants and last for approximately three days.

The 2006 Discussions topic will be *Molecular Motors: Point Counterpoint*. Organized by *Sharyn Endow* of Duke University and *Steven Rosenfeld* of Columbia University, *Molecular Motors: Point Counterpoint* will focus on aspects of the motor mechanism, juxtaposing recent findings from the kinesins with those from the myosins and dyneins. Presentations on other motors will be included where relevant. Talks will emphasize mechanistic themes among motors of different families, pointing out differences and similarities. Discussions will focus on findings from biophysical and biochemical approaches, taking into account those from biological and theoretical methods.

Visit the Biophysical Society website, www.biophysics.org, for application information and program updates.

Opportunities

2005 Clinical Scientist Awards in Translational Research

\$150,000 per year for 5 years

Deadline: September 1, 2005

<http://www.bwfund.org/programs/translational/index.html>

Burroughs Welcome Fund, Career Awards in Biomedical Sciences

Up to 12 fellowships

Deadline: October 3, 2005

<http://www.bwfund.org>

Looking for a job
or
to fill a position?

Visit www.biophysics.org/placement/
for more details.

Members in the News



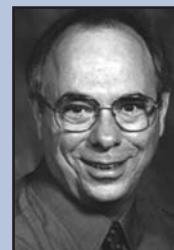
Roderick MacKinnon, of Rockefeller University and Society member since 1985, received the 2005 Hans Neurath Award for his research on ion channels.



Eva Nogales, of the University of California, Berkeley, and Society member since 2000, received the 2005 Chabot Space & Science Center Science Award for excellence in scientific and technological discovery.



Thomas Steitz, of Yale University and Society member since 2003, received the 2004 Frank H. Westheimer Prize for distinguished research in chemistry.



Kevin P. Campbell, of Iowa Carver College of Medicine and Society member since 1979, received the 2004 Rochester Distinguished Scholar Award.

Three Society members were among fifty-eight researchers honored in June at the White House. The researchers were named recipients of the 2004 Presidential Early Career Awards for Scientists and Engineers, the nation's highest honor for professionals at the outset of their independent research careers. Below are the three members and their nominating federal department or agency.

Department of Defense



Mark J. Schnitzer, Stanford University. Society member since 1996.

National Science Foundation



Frank L.H. Brown, University of California, Santa Barbara. Society member since 2000.



Russell S. Schwartz, Carnegie Mellon University. Society member since 2005.

Four Award Recipients Named

The four Society members below will be presented their respective awards during the Awards Ceremony at the Annual Meeting on February 20, in Salt Lake City. Each will present a lecture in the Awards Symposium on February 21.

Thompson Receives Avanti Award



Thomas E. Thompson, of the University of Virginia Health Science Center, will receive the 2006 Avanti Award in Lipids. The award is in recognition for his profound effect on the advancement of knowledge in the area of membrane bio-

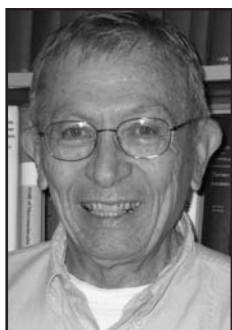
physics, in addition to his outstanding mentoring of students at the undergraduate, graduate, and postdoctoral levels.

Miller Selected for Young Investigators Award



Anne-Frances Miller, of the University of Kentucky, will receive the 2006 Michael and Kate Bárány Award for Young Investigators. Miller was chosen for her noteworthy contribution to the investigations of redox control in metalloenzymes.

Tinoco Jr. is Emily M. Gray Awardee



Ignacio Tinoco, Jr., of the University of California, Berkeley, will be awarded the 2006 Emily M. Gray Award. Tinoco was chosen for his far reaching impact on undergraduate education through his textbook and personal outreach efforts.

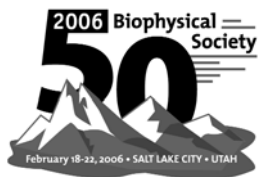
Eaton Named Founders Awardee



William A. Eaton, of LCP, NIDDK, NIH, was selected as the 2006 Founders Awardee. Eaton will receive the award in recognition of his landmark discoveries on the dynamics and function of proteins, which include elucidation

of the molecular aspects of sickle cell disease, and his seminal experimental and conceptual contributions to understanding the mechanism of protein folding through fast kinetics and statistical mechanical models.

Biophysicists in Profile



Herman Schwan

In 1956, a meeting notice, signed by Samuel Talbot and Herman Schwan, announced the "First National Biophysics Conference", which was to take place in Columbus, Ohio, in March 1957. Schwan had been appointed Publicity Chairman for that meeting, and through the use of chain-letter principles, high-profile press conferences that included Nobel Laureates, and sheer perseverance, that first national meeting of biophysicists drew over 500 attendees and gave birth to the Biophysical Society.

Born in Aachen, Germany in 1915, Herman Schwan expressed an interest in and aptitude for mathematics and physics at an early age. The son of a gifted mathematician, who was forced into early retirement for his anti-Nazi views, Schwan struggled financially and politically to receive an education and find employment in Germany. After graduating *summa cum laude* from the acclaimed Göttingen Gymnasium in 1934, he was denied admission to any German university because he was deemed "politically immature" by the school's Nazi represen-

tative. Forced to "volunteer" in the Working Service, a rehabilitation program where he could "redeem" himself, Schwan was allowed to enter Göttingen University after six months of hard physical labor.

In 1937, he was befriended by famed Russian biophysicist

Boris Rajewsky at what would later become the Max Planck Institute of Biophysics in Frankfurt, and began work as a research assistant. Rajewsky allowed him to work while studying at the University of Frankfurt. In Rajewsky's lab, Schwan worked on studies analyzing the biological effects of ionizing radiation. In 1941, Schwan was awarded a PhD in Biophysics. After the fall of Hitler, Schwan was named assistant professor at the University of Frankfurt and associate director of the Max Planck Institute of Biophysics in 1946.

He moved to the US in 1947, accepting a position at the Aeromedical Equipment Laboratory of the US Naval Base in Philadelphia. In 1950, he was named Head of the Electromedical Division of the Moore School at the University of Pennsylvania and in 1961 Chairman of the Graduate School of Arts and Sciences Group on Biomedical Electronic Engineering. In 1972 he became Chairman of the Bioengineering Department. He retired from Penn as Alfred Fidler Moore Professor Emeritus in 1983, but continued to lecture for the next 15 years.

Schwan leaves a legacy in both biophysics and bioengineering, and his involvement in the creation of the Biophysical Society underscores how intertwined the two fields were among many of the Society's founders.

Schwan's research primarily focused on the biological effects of electric fields and the determination and understanding of electrical properties. He is credited with the introduction of standards for safe microwave exposure that continue to be used to this day.

"...he was denied admission to any German university because he was deemed "politically immature" by the school's Nazi representative."

When Schwan entered the field of biophysics in the 1930s, biophysics was an unusual choice and a relatively unknown field. There were no biophysical journals in which to publish biophysical research. His experience with the German Biophysical Society, as well as his interaction with Sam Talbot, Otto Schmitt, Kenneth Cole, and Ernest Pollard—referred to as the Committee of Four—convinced Schwan of the need for a national society that could speak for the



Schwan with model of human body used for RF dosimetric studies. The model is filled with tissue-equivalent liquids and exposed to RF energy in a microwave anechoic chamber that Schwan had constructed in his laboratory. Photograph from ca. 1963.

(Reprinted, with permission, from the Annual Review of Biomedical Engineering, Volume 4 (c)2002 by Annual Reviews www.annualreviews.org.)

nascent field and help secure federal support for that research.

By the 1950s, several groups were forming, and their commonality was the general disagreement about how to define biophysics. For Schmitt, Cole, and Schwan, biophysics was a field that

“...much discussion took place about who would eventually become the stronger: biologists, physicists, or engineers.”

brought together biomedical engineering with medical physics.

Schwan was appointed to the Constitution Committee, where much discussion took place about who would eventually become the stronger: biologists, physicists, or engineers. He argued for a governance structure that included a small Executive Board and a larger Council whose members represented specific fields. The Constitution and Bylaws, adopted in 1958, did contain the proposed structure but did not specify what fields should be represented. In later years, Schwan noted that the omission is why the Biophysical Society gravitated toward biochemistry and physiology rather than physics and engineering—away from the macroscopic biophysics he had envisioned.

Schwan died at the age of 89 on March, 17, 2005, at his home in Radnor, Pennsylvania. He is survived by his wife, Anne Marie Del Borello Schwan, four daughters, one son, and six grandchildren.

To view the transcript of a 1992 interview of Herman Schwan, produced by the Electrical and Electronics Engineers (IEEE) History Center, visit http://www.ieee.org/organizations/history_center/oral_histories/transcripts/schwan.html



Max Lauffer

Max Lauffer at age 90 still resides on Lauffer Farm, just east of Middletown in central Pennsylvania, where he was born in 1914. But much movement took place in the intervening years.

After obtaining his BA and MS degrees in Biochemistry from Penn State in 1933 and 1934, respectively, Lauffer received his PhD in Biochemistry and Physical Chemistry at the University of Minnesota in 1937. From there he returned east to complete his post-doctoral work at the Rockefeller Institute for Medical Research. He remained at Rockefeller until 1944, when he joined the University of Pittsburgh staff as an Associate Professor.

During his 40 years at the University of Pittsburgh, Lauffer held a number of appointments including Professor of Biophysics and Dean of Research in Natural Sciences, a position he held for some ten years.

While at Rockefeller, Lauffer worked with Nobel Prize winner Wendell Stanley on the tobacco mosaic virus. Lauffer's research focus was viruses, but "my work evolved from tobacco mosaic virus being merely a tool," he explains, "to entropy-driven processes in biology." This

became his primary emphasis during the last decade of his research and the work for which he is most noted. During World War I, Lauffer worked on the development of the vaccine for the influenza virus.

At Pittsburgh, Lauffer established a virus research program and continued his work on bacteriophage, the tobacco mosaic virus, and various other plant viruses. He is convinced, however, that his work on entropy-driven processes in biology is the most the important work of his life because "they are involved in many of the processes that involve motion—muscular movement or movement within cells."

In the 40s and 50s, biophysics was not a well defined field, and many felt

“People were enthusiastic and difficult to control—that was a difficult meeting, but there was a unanimous decision at the end of the day to form a society.”

that a biophysical organization was needed. Lauffer vividly remembers finding himself on a very cold day in March of 1957 in Columbus, Ohio, chairing the business meeting of

the First National Biophysics Conference. "Several professors from around the country who called themselves biophysicists—I was one of them—got together with the hopes of forming a group," he recalls. "People were enthusiastic and difficult to control—that was a difficult meeting, but there was a unanimous decision at the end of the day to form a society."

It was at this meeting that a Temporary Council was established as well as a committee chaired by Lauffer to develop the constitution and by-laws, which were adopted at the 2nd Annual Meeting in Cambridge, Massachusetts in

(Continued on page 13.)

Annual Meeting Symposia, Workshop, and Subgroup Schedule

Symposia

Sunday, February 19

8:15 AM – 10:15 AM

Bacterial Chemotaxis and Motility

Richard M. Berry, Oxford University, Chair
David F. Blair, University of Utah
Makoto Miyata, Osaka City University
Jonathan S. Parkinson, University of Utah

8:15 AM – 10:15 AM

Nucleosome Structure, Dynamics, and Function

Jon Widom, Northwestern University, Chair
Karolin Luger, Colorado State University
Geeta Narlikar, University of California,
San Francisco
Tom Owen-Hughes, University of Dundee

10:45 AM – 12:45 PM

50th Annual Meeting Symposium: Biophysics from Molecules to Cells

Steven M. Block, Stanford University, Chair
David R. Davies, NIDDK, NIH
Thomas D. Pollard, Yale University
Peter K. Sorger, Massachusetts Institute of
Technology
Xiaowei Zhuang, Harvard University

4:00 PM – 6:00 PM

Rearranging DNA Strands in Recombination, Replication, and Repair

Tom Ellenberger, Harvard University Medical
School, Chair
Nynke H. Dekker, Delft University of
Technology
Stephen C. Kowalczykowski, University of
California, Davis
Phoebe A. Rice, University of Chicago

4:00 PM – 6:00 PM

Self-Assembly of Cellular Architecture

Eva Nogales, University of California, Berkeley,
Chair
Gary G. Borisy, Northwestern University
Tomas Kirchhausen, Harvard University Medical
School
Keiichi Namba, Osaka City University

Monday, February 20

8:15 AM – 10:15 AM

Energy Transduction and Subunit Coordination in AAA and Related Motor Enzymes

Tania Baker, Massachusetts Institute of
Technology, Chair
Vincent Croquette, ENS, Paris
Dale Wigley, London Research Institute

Additional speakers to be announced.

8:15 AM – 10:15 AM

Structure by Design: From Single Proteins to Nanostructures

Ruth Nussinov, NCI, NIH, and Tel Aviv
University, Chair
David Baker, University of Washington
Luc Jaeger, University of California,
Santa Barbara
Nadrian C. Seeman, New York University

10:45 AM – 12:45 PM

New and Notable

Additional information to be announced

4:00 PM – 6:00 PM

Dynamics in Enzyme Function

Judith P. Klinman, University of California,
Berkeley, Chair
Sharon Hammes-Schiffer, Pennsylvania State
University
Joseph D. Puglisi, Stanford University
Peter E. Wright, The Scripps Research Institute

4:00 PM – 6:00 PM

Small-Scale Systems Biology

Garrett Odell, University of Washington, Chair
Steve Plimpton, Sandia National Laboratories
Michael Elowitz, California Institute of
Technology

Additional speakers to be announced.

Tuesday, February 21

8:15 AM – 10:15 AM

RNA Folding and Unfolding

Anna M. Pyle, Yale University, Chair
Daniel Herschlag, Stanford University
Nils G. Walter, University of Michigan
Sarah Woodson, Johns Hopkins University

8:15 AM – 10:15 AM

Visualizing Molecular Function in Living Cells

Robert Singer, Albert Einstein College of
Medicine, Chair
Akihiro Kusumi, Kyoto University
Siegfried M. Musser, Texas A&M University,
Health Science Center
Clare M. Waterman-Storer, The Scripps Research
Institute

10:45 AM – 12:45 PM

Awards Symposium

Speakers to be announced.

4:00 PM – 6:00 PM

Biophysics of Bacterial DNA Segregation and Cell Division

Harold P. Erickson, Duke University, Chair
Nicholas Cozzarelli, University of California,
Berkeley
R. Dyche Mullins, University of California,
San Francisco

Additional speakers to be announced.

4:00 PM – 6:00 PM

Structure-Function Relationships between Ion Channels and Ion Transporters

David C. Gadsby, Rockefeller University, Chair
Michael P. Kavanaugh, University of Montana
Christopher Miller, Brandeis University
Paola Vergani, University College of London

Wednesday, February 22

8:15 AM – 10:15 AM

Electron Transfer-driven Energy Transduction

Robert R. Gennis, University of Illinois, Chair
James Barber, Imperial College of London
Marilyn Gunner, City College of New York
Carola Hunte, Max Planck Institute, Frankfurt

8:15 AM – 10:15 AM

Statistical Mechanical Insights into Biological Function*Robert Phipps*, California Institute of Technology, Chair*Nick Buchler*, Rockefeller University*Frank Jülicher*, Max Planck Institute, Dresden*Pierre Sens*, Institute Curie, Paris

10:45 AM – 12:45 PM

Myosins: Diversity and Mechanism*Richard E. Cheney*, University of North Carolina, Chair*Anne M. Houdusse*, Institute Curie, Paris*Ron Rock*, University of Chicago*Kathleen M. Trybus*, University of Vermont

10:45 AM – 12:45 PM

Protein Folding and Refolding in Biology*Peter Gettins*, University of Illinois, Chicago, Chair*Robert P. Blumenthal*, NCI, NIH*Carol Deutsch*, University of Pennsylvania

Additional speakers to be announced.

Workshops

Workshops will be held Sunday and Tuesday evenings, 7:30 PM – 9:30 PM.

Sunday, February 19**Analyzing Submicrometer Structure and Motion in Light Microscopy***Jan T. Liphardt*, University of California, Berkeley, Chair*Enrico Gratton*, University of Illinois*Mats Gustafsson*, University of California, San Francisco*Stefan W. Hell*, University of Heidelberg**Biophysics of Channelopathies***Frances M. Ashcroft*, Oxford University, Chair*Stephen C. Cannon*, University of Texas Southwestern Medical Center*Michael C. Sanguinetti*, University of Utah*Richard W. Tsien*, Stanford University**Visualizing Time-resolved Structures of Macromolecules and Complexes***Philip A. Anfinrud*, NIDDK, NIH, Chair*Michael D. Brenowitz*, Albert Einstein College of Medicine*Roger W. Craig*, University of Massachusetts Medical School

Additional speakers to be announced.

Tuesday, February 21**Coarse-graining Methods for Biomolecular Structure and Dynamics***Gregory A. Voth*, University of Utah, Chair*Charles L. Brooks, III*, The Scripps Research Institute*Siewert-Jan Marrink*, University of Groningen*Michael Thorpe*, Arizona State University**Deducing Mechanisms from Single-Molecule Data: Channels to Enzymes***Taekjip Ha*, University of Illinois, Urbana, Chair*Ehud Y. Isacoff*, University of California, Berkeley*Karl L. Magleby*, University of Miami*Hiroyuki Noji*, University of Tokyo**Microfluidics in Biophysics Research***Steven R. Quake*, Stanford University, Chair*Robert H. Austin*, Princeton University*David Beebe*, University of Wisconsin, Madison*Rustem F. Ismagilov*, University of Chicago**Subgroups**

All subgroup meetings will be held on Saturday, February 18.

Bioenergetics*Marco Colombini*, University of Maryland, College Park, Subgroup Chair**Morning Symposium: Mitochondria and Regulation of the Cellular Energy State***Uwe Schlattner*, Swiss Federal Institute of Technology, Chair*Valdur Saks*, University Joseph Fourier, Grenoble*Petra Dzeja*, Mayo Clinic and Foundation*Nissim Hay*, University of Chicago*William Winder*, Brigham Young University**Afternoon Symposium: Systems Biology: Mitochondria are not Alone***Hartmut Woblrab*, Boston Biomedical Research Institute and Harvard Medical School, and *Svitlana Berezhna*, The Scripps Institute, Co-Chairs*Arvind Ramanathan*, Broad Institute of Harvard University and Massachusetts Institute of Technology*Luis A. Nunes Amaral*, Northwestern University*Joseph Bass*, Northwestern University**Vamsi Mootha*, Harvard University

*Presentation is sponsored by the United Mitochondrial Disease Foundation

Biological Fluorescence*Robert Clegg*, University of Illinois, Urbana, Subgroup Chair*Marcos Dantus*, Michigan State University*Elliot L. Elson*, University School of Medicine*J. Woodland Hastings*, Harvard University*Gerard Marriott*, University of Wisconsin, Madison

(Continued on page 12.)

Ask Professor Sarah Bellum

Professor Sarah Bellum answers your questions on navigating the often-uncharted waters of early career development. Do you have a question for Professor Bellum? Send it to sarah_bellum@biophysics.org. Your privacy and anonymity are assured!

Scientific Puberty

Q: *I am in the middle of a huge fight with my postdoc advisor; this is our second big fight this month. Even when we are not fighting, I don't feel like I am receiving any scientific support from him. I must do everything on my own, and I rarely get feedback on my experimental results. Sometimes I do offer my own interpretations of my results, but if it disagrees with his interpretations, it falls on deaf ears; there is no room in his mind for another viewpoint. Even worse, my advisor is often invited to speak at big conferences, where he is quite happy to take credit for my work (and of course, present only his interpretations!). Since my fellowship provides travel support for only one conference per year, I am often left behind in the lab, toiling without support, and I do not feel like I have ownership of my own results. We are supposed to be writing a big paper (my first in his lab) on this stuff, but I just can't seem to get started. After all, how can I expect to produce a manuscript with this guy when I cannot stand being in the same room with him?*

— *Scorned in Santa Barbara*

A: It sounds like you have got a big, classic case of "postdoctoral angst"! In many ways, the symptoms of postdoctoral angst are a lot like the symptoms of adolescent angst. For example, consider the following statements:

- "He doesn't love me/care about my project!"
- "He doesn't listen to me!"
- "He doesn't understand me!"
- "He treats me like a child!"
- "I'm old/experienced enough to do this on my own!"
- "I need my own money!"
- "I can't stand being with him!"

Sound like anyone you've seen around your lab bench recently? Or hanging out at the mall? If so, rest assured you are not alone: postdoc angst, like adolescent angst, is a near-

universal phenomenon and a natural part of the (sometimes painful) maturation of a student/trainee into an independent scientist.

Postdoc advisors are in a position to exert a great deal of influence on your nascent scientific career, and this can be a major source of conflict, internal and external. On the one hand, you are still learning to navigate the minefields of scientific research, and assistance

from your advisor would be enormously helpful. But on the other hand, you are starting to develop your own ideas about how research (particularly as it pertains to your own project) should be

done, and that leads to a natural desire to stand up for your results and your interpretations and ask for credit.

But on the *third hand*, most postdocs are loath to piss off their advisors when there are still many recommenda-

“You are in mid-metamorphosis, trapped between your carefree (and often highly supervised) student days and the smudge on the horizon that is scientific independence.”

tion letters left to write. Professor Bellum could go on and on, covering a centipede worth of hands, but you probably get the idea: You are in mid-metamorphosis, trapped between your carefree (and often highly supervised) student days

and the smudge on the horizon that is scientific independence. Much as your transition from child to adult probably involved some friction with your parents, completing your scientific meta-

morphosis will undoubtedly require some friction with your advisor and some inherent conflict between your role as a trainee versus your growing independence as a person/scientist.

Professor Bellum notes, however, that many of your comments sound a lot like whining. After all, it sounds like you have a great project that is moving along nicely, and an advisor who is on the road promoting this work, regardless of how the credit is divided. It also sounds like your PI is trying to give you space to do your own thing, and not micromanage your project. This is admirable, as it will give you a chance to spread your wings, solve your own problems, and develop your skills at project management. So, as an alternative to complaining, consider the merits of recognizing this angst for what it is, and where it comes from; recognition alone might help alleviate the angst. Changing your attitude about how you approach your project (and your interactions with your advisor) will probably help you suck in your breath and focus on doing the work required to move your project forward, even through the frictions.

You probably came to your advisor's lab for a variety of reasons, but one of them (hopefully) was that you like and/or admire your advisor. Other people probably like and admire him, too (do they?). If so, seek out some of these people, particularly former post-doctoral trainees. Talk about the conflicts you are experiencing, ask if they

experienced something similar, and ask how they worked through it. Perhaps there are some strategies there that you can use in your own situation.

If you are at loggerheads with your advisor over the interpretation of a particular result, take this opportunity to design additional experiments to test your conflicting models. You can turn this negative situation into a positive one: manuscripts are often strengthened when at least one author is not in love with the interpretation of the data, because that kind of friction keeps everyone on their toes, and often turns up potential weaknesses that manuscript reviewers would have flagged. In addition to bolstering (or disproving) your own interpretation of the results, an extra set of experiments might enable you to effectively remove those flags prior to submission.

You specifically mentioned your dread surrounding the writing of a manuscript, and this has Professor Bellum particularly worried. Manuscripts are the currency of scientific progress, and they are crucial at every stage of your scientific career. Even if your thesis project produced a big stack of publications, you still need to demonstrate that you can execute on a different project, and work with a different group of people.

Fortunately for you, it sounds like

your project is proceeding nicely, since you are planning to write a big manuscript. Start planning and outlining concretely, and start doing it *on your own*. You are not a student any more,

and you need to take responsibility for writing your own papers. Expect your advisor to *advise*, but not to lead this writing project. For example, start by putting together a rough outline and list of figures on your own. Review it with your advisor to check that you both roughly agree on the general 'shape' of the manuscript (and there are no missing experiments), then get cracking on the writing as soon as you possibly can. Take the practice of writing very seriously: as your career progresses, writing will assume an ever-increasing role. If you know (or even suspect) that writing does not come easily to you, start checking out some of the excellent texts available on improving your scientific writing skills [1], and facilitating the process of writing [2]. Check back in with your advisor if you get really stuck, or when you have a good draft for a significant chunk of the manuscript. At that point, you can and should expect your advisor to talk seriously with you, as a (near) equal, about how to proceed.

[1] Gopen, G.D. (2004) *Sense of Structure* (Longman, New York).

[2] Boice, R.M. (1990) *Professors as Writers: A Self-Help Guide to Productive Writing* (New Forums, New York).

“Manuscripts are the currency of scientific progress, and they are crucial at every stage of your scientific career.”

“...manuscripts are often strengthened when at least one author is not in love with the interpretation of the data...”

(Continued from page 9.)

Membrane Biophysics

David Yue, Johns Hopkins University School of Medicine, Subgroup Chair

Horizons for the Queen of Ion Transport: Ca_v Calcium Channels

Daniel Minor, University of California, San Francisco

Henry Colecraft, Johns Hopkins University School of Medicine

Gerald Zamponi, University of Calgary

Diane Lipscombe, Brown University

Veit Flockerzi, Universitat des Saarlandes

Richardo Dolmetsch, Stanford University

Membrane Structure & Assembly

Leonoid Chernomordik, NICHD, NIH Subgroup Chair

Biological Membrane Fusion: Mechanisms and Intermediates

Michael Kozlov, Tel Aviv University

Felix Rey, Institut Pasteur

Gregory Melikyan, Rush College

Yeon-Kyun Shin, Iowa State University

Andreas Mayer, Universite de Lausanne

Xiaowei Zhuang, Harvard University

What is a Housing Block?

Each year, Annual Meeting attendees are encouraged to make their hotel reservations through a Housing Office/Bureau, found on the Society's website, and to reserve rooms in hotels with which the Society has contracted. This group of hotels is called a "housing block." What is a housing block and why is it important? What is a Housing Office/Bureau and what are the benefits of using one?

A housing block is a group of hotels with which BPS has contracted for a specific number of rooms at competitive nightly rates. Part of the contract includes guarantees for meeting attendees in the event of overbooking, construction, or problems with a room. A Housing Office/Bureau is a central clearinghouse for all reservations in the block. On any day, the Office/Bureau can see how many rooms are available in each hotel and provide the hotels with lists of those who have made reservations. The Office/Bureau immediately takes care of any problems that arise for attendees who have booked through their service.

If, for example, a hotel within the block overbooks and the attendee used the Housing Office/Bureau to secure the room, the attendee is guaranteed either a room at that hotel or very specific and generous compensation. If, on the other hand, an attendee secured a room outside the room block, the hotel is under no contractual obligation to provide a room or compensation. In that scenario, the hotel will always move the outside-the-block attendee.

Filling a room block is important because it provides a "report card" on the Society to future meeting sites. By establishing a history of always filling the room block, the Society is able to secure both competitive room rates and larger blocks of rooms in subsequent years.

The 2006 Annual Meeting, which will be held in Salt Lake City, Utah, will be the Society's 50th Annual Meeting. The Salt Lake Convention & Visitors Bureau will manage the Housing Office for that meeting. The site may be accessed at www.biophysics.org.

The Society has contracted with six hotels in Salt Lake City, including The Grand America, which will serve as the headquarters hotel. The Grand America is a five-star hotel, and the Society was able to secure excellent rates for the beautiful rooms. It will be a memorable headquarters hotel for the 50th Annual Meeting. We're looking forward to seeing you in Salt Lake City!



Important Deadlines

Abstract Submission.	October 2
International Travel Application.	October 2
Student Travel Application	October 2
SRAA Poster Competition.	October 2
MARC Travel Award Applications.	October 2
Abstract Revision.	October 7
Room Sharing Reservations.	October 17
Abstract Withdrawal.	October 24
Student Housing Reservations.	November 4
Early Registration.	December 9
General Housing Reservations.	January 26, 2006

(Continued from page 7.)

1958. "A lot of people worked extremely hard to prepare a complete picture of what the Biophysical Society should be," Lauffer explains, "this was done by a group of various committees."

Lauffer was later elected President of the Biophysical Society. He also served on the Biophysical Journal's Editorial Board from 1961-1964. In 1981, the Executive Board named Lauffer the Society's archivist. Convinced that the Society would last and continue to grow, the position was created in an effort to assemble and preserve the history of the first twenty-five years of the Society.

Many members responded to the often personal requests from Lauffer to send memorabilia such as pictures, important correspondence about the work and organization of the Society, and newspaper clippings concerning meetings.

Lauffer retired from the University of Pittsburgh in 1984, although he remained affiliated with the University as a consultant to the provost on administrative matters, until 1986. From 1986 to 1990 he taught a course in Chemistry at Lebanon Valley College in Annville, Pennsylvania. The course was designed not for students who were interested in becoming chemists, but for those who just wanted to find out a little bit about

the subject.

Today Lauffer resides in Pennsylvania with his wife Erika, and maintains his active membership in the Society. He also continues to be on the advisory board of Global Solutions, an organization devoted to educating the public on the importance of global interdependency.

He and his wife have three sons, one daughter, six grandchildren, and two great-grandchildren. When asked if any of them share his love of science, Lauffer chuckles and says, that "unfortunately my children rebelled hard against science—although my daughter is a mathematics teacher at a public school in Arlington, Virginia."

The Biophysical Society Placement Center

The Biophysical Society provides a career placement service at the Annual Meeting. The fee is waived for current members seeking positions and for employers who are also exhibitors at the 2006 Annual Meeting in Salt Lake City, Utah. Current members posting positions, academic and commercial employers may submit job openings for a nominal fee.

To post a job opening or CV, visit <http://www.biophysics.org/placement/>. All Placement Service ads and CVs remain online for six months before being removed. For further information contact the Society office at 301-634-7114 or email: dmcgavin@biophysics.org.



Imaging/Microscopy Position

A Research Associate or Research Scientist position is available for someone with experience in fluorescence microscopy and imaging to participate in or lead a collaborative research program aimed at developing novel methods for fluorescent imaging of molecular dynamics and associations in cells migrating cells in vitro and in vivo. A Ph.D. in a related discipline and familiarity with fluorescence microscopy and imaging is required. Rank and title will be commensurate with experience and scholarly achievements.

This position will be opened until filled. Application material including a current curriculum vitae, names and addresses of three references should be sent to:

Rick Horwitz
Department of Cell Biology
Box 800732
University of Virginia Health System
Charlottesville, VA 22908-0732
Fax: 434-982-3912
Horwitz@virginia.edu

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Public Affairs

FY2006 Federal Science Budgets

The House of Representatives finished its appropriations bills prior to its August recess. Following the President's Request for FY2006, the bills provide flat budgets or modest increases for science agencies in 2006. The full Senate still has to vote on all the appropriation bills.

The FY2006 Labor, Health and Education Appropriations bill provides \$28.7 billion for the National Institutes of Health in 2006; \$143 million more than the agency received in 2005 but \$3 million less than the President requested. According the AAAS, if this budget is approved by the Senate, FY 2006 would be the first time in 24 years that the NIH R&D portfolio would not match inflation. The Senate appropriators approved an additional 900 million for the NIH, but the full Senate still has to take up the measures.

The FY2006 Science, State, and Justice Appropriations Bill provides \$5.64 billion for the National Science

“...if this budget is approved by the Senate, FY 2006 would be the first time in 24 years that the NIH R&D portfolio would not match inflation.”

Foundation (NSF). This bill, if accepted by the Senate, would increase NSF funding by \$171 million over 2005 and \$38

million above the President's budget request. Unfortunately, the Senate Commerce, Justice, and Science Appropriations Subcommittee is recommending to the Senate a budget that includes only \$5.5 billion for the agency. The full appropriations committee and the full Senate still must vote on the bill.

It is expected that once again, Congress will not finish the budgets by the September 30 deadline.

BPS Signs Evolution Amicus Brief

The Biophysical Society signed an amicus brief opposing the placement of evolution disclaimers in Cobb County, Georgia textbooks. The brief asserts that there is no valid scientific or pedagogical reason that a disclaimer regarding the "theory" of evolution be placed inside biology textbooks. It was prepared to assist the US Court of Appeals, Eleventh Circuit, in making a decision regarding a lawsuit (*Selman v. Cobb County School District*) presented by proponents of intelligent design. They seek to overturn the favorable decision in the lawsuit in Cobb County, Georgia over anti-evolution warning labels.

The brief was submitted on June 10 by the National Center for Science Education (NCSE) and People for the American Way (PFAW). Fifty-five other scientific societies also signed the "friend of the court" document. The NCSE is a clearinghouse for information and advice on defending the teaching of evolution in public schools.

The Cobb County disclaimer that is

at the heart of this case, warns students that:

"This textbook contains material on evolution. Evolution is a theory, not a fact, regarding the origin of living things. This material should be approached with an open mind, studied carefully, and critically considered."

The US Court of Appeals, Eleventh Circuit, will review the case within the next few months.

For the text of the NCSE/PFAW amicus brief, as well as seven other amicus briefs in support of the *Selman* decision, and for background on the *Selman* case, visit the National Center for Science Education website at: <http://www.ncseweb.org/selman/index.html>.

BPS Signs Visa Process Reform Letter

In May, the Biophysical Society joined a group of 40 leading academic, science, and engineering associations urging the US government to accelerate its effort to reform the visa process for international students, scholars, and researchers. While noting that progress has been made during the past year, the group said that additional steps are needed to help dispel the "misperception that our country does not welcome these international visitors, who contribute immensely to our nation's economy, national security, and higher education and scientific enterprises."

The organizations represent nearly all of the higher education and research communities, as well as many of the businesses and industries vital to the US economy.

The groups, led by the Association of American Universities (AAU) and the American Association for the Advancement of Science (AAAS), made six recommendations for reducing or eliminating barriers that they said cause undue hardship for the kind of visitors who for decades have helped sustain the nation's leadership in science and innovation. The group recommends:

- ◆ Extending the validity of Visas Mantis security clearances for international scholars and scientists from the current two-year limit to the duration of their academic appointment.
- ◆ Allowing international students, scholars, scientists, and engineers to renew their visas in the US.
- ◆ Renegotiating visa reciprocity agreements with key sending countries to extend the duration of visas for citizens of each country and permit multiple entries on a single visa.
- ◆ Amending inflexible requirements that lead to frequent student visa denials.
- ◆ Developing a national strategy to promote academic and scientific exchange and to encourage international students, scholars, scientists, and engineers to pursue higher education and research opportunities in the US.
- ◆ Not requiring that export licenses be obtained for international scientists and engineers to use equipment for unclassified, fundamental research in the US.

The statement is available on the BPS Web site at: www.biophysics.org.

US Beijing Embassy Announces Visa Reciprocity Agreement

The US embassy in Beijing announced on June 14, that the United States and China have reached a new reciprocity agreement for student visas. The agreement extends the validity of a visa from the current six months to 12 months. The agreement also permits multiple entries under a visa, compared to two entries permitted under the previous agreement. The reciprocity agreement, which applies to student visas (F-1/F-2), exchange visas (J-1/J-2), and vocational training visas (M1/M2), took effect on June 20.

The embassy press release notes that the change will allow student travelers to visit home with greater ease, and save them time and money applying for renewals.

The announcement also notes that the numbers of Chinese student applications and visas have increased this year. As of May, the embassy and four consulates had issued 800 more student visas and 300 more exchange visa than they had at that point last year.

The embassy press release is available at: <http://www.usembassy-china.org.cn/press/release/2005/061405vis.html>.

Roundup

Congress: Congressmen *Boehlert* (R-NY), *Wolf* (R-VA), and *Ehlers* (R-MI) plan to hold an Innovation Summit this fall. Wolf secured funding for the summit in

the fiscal year 2005 supplemental appropriations bill that passed the House last week.

Regarding the summit, *Boehlert* said: "A summit like this, with the right leaders, under the aegis of the federal government, can bring renewed attention to science and technology concerns so that we can remain the nation that the world looks to for the newest ideas and the most skilled people."

Wolf, who chairs the House appropriations subcommittee responsible for funding the National Science Foundation (NSF), further expressed his support for science funding in a letter to President Bush. In that letter, he asked the President to triple the federal investment in basic science research over the next ten years.

NSF: President Bush has nominated, and the Senate has confirmed, *Kathie Olsen* to the position of Deputy Director of the NSF, replacing outgoing Deputy Director *Joe Bordogna*. Olsen was the Associate Director of Science in the White House Office of Science and Technology Policy.

NIST: President Bush has nominated, and the Senate has confirmed, *Jeffrey Olson* to be the Director of the National Institute for Standards and Technology (NIST). Jeffrey was previously the Senior Director for Homeland and National Security and the Assistant Director for Space and Aeronautics in the White House Office of Science and Technology Policy.

Lewis will fill the position left when *Arden Bement* left NIST to become Director of the NSF.

Upcoming Events*

August 13-19, 2005

60th Harden Conference: Inositol Phosphates and Lipids - Regulation and Functions

Ambleside, Lake District

<http://www.biochemistry.org/meetings/programme.cfm?meetno=H60>

August 23-31, 2005

XX Congress of the International Union of Crystallography
Florence, Italy

<http://www.iucr2005.it/>

August 27-September 1, 2005

15th International Biophysics Congress (IUPAB) & 5th European Congress of Biophysics (EBSA) 2005 Joint Meeting
Montpellier, France

<http://www.iupab.org/>

September 4-7, 2005

Neutrons in Biology (Satellite of the IUPAB/EBSA World Biophysics Congress)

Institut Laue Langevin, Grenoble, France

<http://www.ill.fr/neutbio2005>

September 5-7, 2005

University of Oxford Meeting on Ion Channels, Genes and Regulation in Smooth Muscle

Oxford, England, United Kingdom

<http://www.physoc.org/meetings/>

September 21-24, 2005

45th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC)

New Orleans, Louisiana

<http://www.icaac.org>

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



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