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**2004 Annual Meeting  
 Symposia and Workshop Schedule, page 4**

**February 14-18, 2004  
 Baltimore Convention Center  
 Baltimore, Maryland**

*Abstract Submission Deadline: October 5, 2003*

<http://www.biophysics.org>

**2003 Society Election Results**

*Steven M. Block*, Professor of Biological Sciences and Applied Physics at Stanford University, was elected President-elect of the Biophysical Society. He will assume the office of president-elect at the 2004 Annual Meeting in Baltimore and begin his term as President during the 2005 Annual Meeting in Long Beach.

*Richard G. Brennan, Eric Jakobsson, Stephen L. Mayo, Tobias Meyer, Diane M. Papazian, Paul R. Selvin, and Lynmarie K. Thompson* were elected to serve three-year terms on Council beginning at the Annual Meeting in 2004.

This was the second year in which electronic voting was used. A record 31% (1606) of eligible members cast votes. Society members may volunteer to run for Council or nominate others to do so. A nomination by petition form may be found on page 15.

**Councilors**

**President-elect**



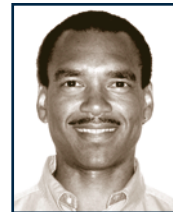
*Steven M. Block*  
Stanford University



*Richard G. Brennan*  
Oregon Health & Science  
University



*Eric Jakobsson*  
University of Illinois, Urbana



*Stephen L. Mayo*  
Caltech University



*Tobias Meyer*  
Stanford University,  
School of Medicine



*Diane M. Papazian*  
University of California,  
Los Angeles



*Paul R. Selvin*  
University of  
Illinois, Urbana



*Lynmarie K. Thompson*  
University of Massachusetts,  
Amherst



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## Biophysicist in Profile



Michael F. Summers

From second grade through high school, Michael F. Summers spent every summer working on his relatives' dairy farm with aspirations of becoming a dairy farmer himself when he grew up.

Today, Summers is Professor of Chemistry and Biochemistry at the University of Maryland, Baltimore County as well as a Howard Hughes Medical Institute Investigator. His journey into the world of science was a gradual process, guided by key people who had a profound influence on him. Like those who provided guidance in his early years, Summers has now dedicated himself not only to scientific discovery but to the development of fertile, young minds interested in chemistry and in the diversification of the sciences.

Summers was born in Milwaukee, Wisconsin, in 1958. When he was just four, his parents Tom and Ruth relocated to St. Petersburg, Florida. Each summer, he returned to Wisconsin, providing an extra set of hands on the family dairy farm. "There is something about being physically tired at the end of the day rather than mentally

drained," says Summers. The idea of working with his hands and body appealed to him. Even the early morning hours of milking and feeding cows did not dampen the attraction of that lifestyle.

His mother was a nurse, and his father an electrical engineer for Honeywell Aerospace Division. Summers recalls that his father, who spent a much of his time in an office, would often say, "Mike when you grow up, I hope that you can have your own business and be your own boss." On the other hand, Summers' dairy farmer uncle would advise him to get an office job so he could punch a clock and be done by a certain time each day and have free weekends. From these seemingly opposing viewpoints, Summers decided that his ideal career would be an occupation that would allow him to make his own choices and follow his own inspirations, but at the same time allow him to balance other important aspects of his life. "The career I took offered the best of both worlds," Summers explains, "There are freedoms that come with an academic position and the ability to pursue your own ideas." Scientific research has allowed him to test the limits of his mind, and teaching has allowed him to make his own choices based on his personal teaching style.

His first interest in science began in a chemistry class during middle school where his teacher, Mr. Cummings, showed him how fascinating science could be. Later, after two years at the local Junior College, Summers decided to pursue a degree in chemistry. One teacher in particular, Nina Milton, played a key role in his decision. Because of her dedication to fostering her students' interests, she drove his class several hours away to the

University of West Florida for a field trip that lasted all weekend.

He soon transferred to the University of West Florida and earned his BS in chemistry in 1980. Surprisingly, Summers says he did not start to become serious about academics until he started his graduate training at Emory University in 1980. His advisor at the time, Luigi Marzilli, helped him to realize his potential. Summers candidly remarks that, "up until that point I don't think I had worked hard academically, but Marzilli taught me to write." Four short years later, Summers completed his PhD at Emory in Bioinorganic Chemistry and won the Emory Excellence in Graduate Research Award.

From 1984 to 1987 Summers was a Junior Staff Fellow at the Center for Drugs and Biologics, Food and Drug Administration at the National Institutes of Health, which he describes as a "great environment." The lab chief at the time, Bill Egan, managed the lab so those working there would have exposure to a wide variety of scientists and scientific fields, which allowed Summers to participate in early research stages of nuclear magnetic resonance to study coenzymes and nucleic acids. He learned what their structures are like in solution and how they behave. During that time, Summers worked with people like Ad Bax, now Senior Investigator at NIH. Summers feels very privileged to have worked with Bax, whom he says "is considered by most people in the field to be the leading expert in the development of these methodologies and their application to bimolecular structure determination." Summers co-authored several papers with Bax on the development of NMR method.

When his appointment with NIH came to a close, he joined the

Department of Chemistry and Biochemistry at the University of Maryland Baltimore County (UMBC). At the time, he saw the position as a stepping-stone, but his research quickly blossomed and he became ever more involved in the University itself. It was, however, a big adjustment, he admits, "learning to teach, being prepared for students, writing grants, starting research." He has high praise for the people he works with. "I have a really supportive faculty," Summers explains, and "even in the leanest times they have had great funding and strong research."

His involvement in student mentoring quickly grew as well, and has become very important to him. He now has no desire to move to another institution. "There are things here that nobody else is doing, especially regarding minority mentoring," he says proudly. Summers became involved with minority affairs through UMBC's president Freeman Hrabowski. "He [Hrabowski] opened my eyes to the problem," says Summers. In 1988, Hrabowski implemented the Meyerhoff Scholarship Program, funded by a grant from The Robert and Jane Meyerhoff Foundation. The program is designed to recruit students from all ethnic backgrounds who have demonstrated academic ability in mathematics, computer science, and engineering, and who are committed to accelerating

diversity in the sciences. Each year 50 slots are open to any US student that meets those criteria. "It is not true that there isn't interest in science among minority students," Summers states. "Each year, for a program that has 50 open slots, we get over 1500 applicants,

mostly from Maryland. Imagine the national potential." The goal is to help freshmen students do well in their required college courses and, ultimately, getting those interested in the sciences into the lab.

In 1994, in conjunction with his position at UMBC, Summers began working for Howard Hughes Medical Institute as an Associate Investigator and was then promoted to Investigator in 1999. When students began to ask Summers for permission to do research in his lab, Howard Hughes made it possible. The Institute rents his lab facilities from UMBC, which provides Summers and his students with ample space to do research. The lab uses NMR to look at the structure and function of different components of retroviruses, such as HIV. "We have solved the structures of several of the key proteins that make up the virus," Summers explains. "More recently we've looked at how those proteins interact not only with each other but with the nucleic acids that have to be incorporated into the virus when begins assembling inside an infected cell."

The support from Howard Hughes has had a profound impact on UMBC, because the students have been able to

receive a paycheck for their work, creating more incentive. "It is a great synergistic relationship," says Summers, "When Hughes does something nice for me,

UMBC feels compelled to do something nice for me also. So growth has been tremendous!" More than 25 undergrads and five high school students were able to use his lab this summer because of the support.

*(Continued on page 9.)*

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**"There is something about being physically tired at the end of the day rather than mentally drained."**

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## Annual Meeting Symposia and Workshop Schedule

### Symposia

Sunday, February 15

8:15–10:15 AM

#### The Structure of Coupled Transport

##### Introduction

*Ernest M. Wright*, University of California, Los Angeles, Chair

##### The Structure of the Lactose Permease Symporter

*H. Ronald Kaback*, University of California, Los Angeles

##### The Thyroid Na/Iodide Symporter

*Nancy Carrasco*, Albert Einstein Medical Center

##### The Oxalate/Formate Exchanger

*Peter Maloney*, Johns Hopkins University School of Medicine

##### Crystal Structure and Mechanism of the E. coli Glycerol-3-Phosphate Transporter

*Da-Neng Wang*, New York University Medical Center

8:15–10:15 AM

#### Non-Classical Molecular Motors

##### Accommodation and Proof Reading by the Ribosome

*Steven Chu*, Stanford University, Chair

##### DNA Transposition Immunity: Visualizing ATP-dependent Redistribution of MuB Protein along Single DNA Molecules

*Kiyoshi Mizuuchi*, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

##### Molecular Motors in Viral and Eukaryotic DNA Packaging

*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

##### Integration of Proteins into Membranes:

##### Role of the Lipid Environment

*J. Antoinette Killian*, University of Utrecht, Chair

##### Membrane Protein Folding: Biophysics, Biochemistry and Computational Biology

*Donald Engelman*, Yale University

##### Recognition of Transmembrane Helices by the ER Translocon

*Gunnar von Heijne*, University of Stockholm

#### YidC: An Essential Protein Involved in Membrane Protein Folding and Insertion

*Ross Dalbey*, Ohio State University

10:45 AM–12:45 PM

#### RNA Structure and Processing

##### RNA Structure and Dynamics

*Kathleen Hall*, Washington University, Chair

##### Role of a Conserved Pseudouridine in Conformation of the Spliceosomal Pre-mRNA Branch Site

*Nancy Greenbaum*, Florida State University

##### Structure and Dynamics of U6 RNA

*Samuel Butcher*, University of Wisconsin

##### How Do Thermophilic Ribozymes Get to Be More Stable

*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

##### Mechanical Amplification by Ion Channels in the Inner Ear

*A. James Hudspeth*, Rockefeller University, Chair

##### Sticking Out Its Neck: Myosin-1c and Adaptation of Hair-cell Transduction

*Janet Cyr*, West Virginia University

##### The Mechanical Frequency Selectivity of the Cochlear Basilar and Tectorial Membranes

*Ian Russell*, University of Sussex, Brighton

##### On Using a Transporter Protein to Power the Cochlear Amplifier

*Jonathan Ashmore*, University College, London

4:00–6:00 PM

#### Protein Misfolding and Amyloidogenesis

##### Title to be announced

*Robert Griffin*, Massachusetts Institute of Technology, Chair

##### Common Structures and Mechanisms of Pathogenicity for Soluble Amyloid Oligomers

*Charles Glabe*, University of California, Irvine

##### Common Themes of Amyloid Fibril Formation Detected by Site-directed Spin Labeling

*Ralf Langen*, University of Southern California

**Membrane Lipid Composition as a Determinate of Amyloid Formation**

*JoAnne McLaurin*, University of Toronto

**Monday, February 16**

8:15–10:15 AM

**Signaling through Phospholipids and Their Metabolites**

**Phosphatidylinositides at Ion Transporters and Channels**

*Donald Hilgemann*, University of Texas Southwest Medical Center, Chair

**Phosphoinositide Regulation of the Actin Cytoskeleton and Membrane Trafficking**

*Helen Yin*, University of Texas Southwest Medical Center

**Dynamics of Phosphoinositides in Membrane Retrieval and Insertion**

*Michael Czech*, University of Massachusetts, Worcester

**Gating of K Channels by Phosphatidylinositol Bisphosphate (PIP<sub>2</sub>)**

*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

**Title to be announced**

*Ron Kopito*, Stanford University

**The Stress of Misfolded Proteins**

*Richard Morimoto*, Northwestern University

**Molecular Chaperone Action in Polyglutamine Aggregation Disease**

*Ulrich Hartl*, Max Planck Institute for Biochemistry

**Polyglutamine Folding and Aggregation in Huntington's Disease**

*Ronald Wetzel*, University of Tennessee

10:45 AM–12:45 PM

**Membrane Protein Structural Dynamics**

**Rotational Dynamics on the  $\mu$ sec to msec Time Scale: Probing the Oligomeric State of Membrane Proteins**

*Albert Beth*, Vanderbilt University, Chair

**Monitoring Protein Motions in Membranes Using Site-directed Spin Labeling**

*Wayne Hubbell*, University of California, Los Angeles

**Conformational Dynamics of the Beta 2 Adrenoceptor: Effect of Ligand Structure on Receptor Structure**

*Brian Kobilka*, Stanford University

**NMR Probes of Calcium Transport Regulation**

*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

**Rotary Protein Motors**

*George Oster*, University of California, Berkeley

**Physics and Viral Infection**

*Robijn Bruinsma*, University of California, Los Angeles

**Mechanics of Macromolecular Assemblies**

*L. Mahadevan*, Cambridge University

**Individual and Collective Dynamics of Bacteria**

*Raymond Goldstein*, University of Arizona

4:00–6:00 PM

**Visualizing Cells and Organelles**

**Electron Tomography: Towards Visualizing Supramolecular Architecture Inside Cells**

*Wolfgang Baumeister*, Max Planck Institute for Biochemistry, Martinsried, Chair

**Holding Live Cells Up to the Light: New Advances in Optical Imaging of Intracellular Processes**

*X. Sunney Xie*, Harvard University

**Structural Dynamics of the Nucleus in Live Cells**

*Jan Ellenberg*, European Molecular Biology Lab

**Whole Cell Cryo X-Ray Tomography and Protein Localization at 50 nm Resolution**

*Carolyn Larabell*, University of California, San Francisco, Lawrence Berkeley National Laboratory

(Continued on page 6.)

(Continued from page 5.)

*Tuesday, February 17*

8:15–10:15 AM

**Membrane Biomechanics and Mechano-sensitive Channels**

**Gating Mechanisms of Bacterial Mechanosensitive Channels**

*Sergei Sukharev, University of Maryland, Chair*

**Crystallographic Studies of Prokaryotic Mechanosensitive Channels**

*Douglas Rees, Caltech*

**Activity of Mechanosensitive Channels: Bilayer Composition and the Lateral Pressure Profile**

*Robert Cantor, Dartmouth College*

**Dynamic Tension Spectroscopy of Membranes: Exposing the Dramatic Impact of Protein Toxins on Energy Barriers to Pore Formation**

*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*

**Initiation, Elongation, Translocation and Strand Separation by T7 RNA Polynase**

*Thomas A. Steitz, Yale University*

**Structural Studies of Prokaryotic Transcription**

*Seth Darst, Rockefeller University*

**<sup>3</sup>Structural Insights into NAD<sup>+</sup>-dependent Deacetylation by Sir2 Proteins**

*Cynthia Wolberger, Johns Hopkins University*

**Structural Aspects of Gene Expression by Formation of High Order Protein Complexes on Promotor DNA**

*Tahir Tahirov, RIKEN, Hyogo*

**Structural Insights into Leukaemogenesis**

*Alan Warren, Medical Research Council*

10:45 AM–12:45 PM

**Awards Symposium**

*Yale E. Goldman, University of Pennsylvania, Society President, Chair*

**Distinguished Service Award**

*Mary Dicky Barkley, Case Western Reserve University*

**Founders Award**

*Carlos Bustamante, University of California, Berkeley*

**Michael & Kate Bárány Award for Young Investigators**

*Paul R. Selvin, University of Illinois, Urbana*

**Avanti Award in Lipids**

*Thomas J. McIntosh, Duke University Medical Center*

4:00–6:00 PM

**Flexibility and Allostery in Signaling Proteins**

**Dynamics of PKA Structure and Localization**

*Susan Taylor, University of California, San Diego, Chair*

**Rigidity and Catalysis in Thermophilic Enzymes**

*Dorothy Kern, Brandeis University*

**Flexibility and Allostery in Signaling**

*Dorothy Beckett, University of Maryland, College Park*

**Allosteric Pathway in Lactose Repressor Protein**

*Kathleen S. Matthews, Rice University, Wiess School of Natural Sciences*

**Intrinsically Disordered Protein and Cell Signaling**

*A. Keith Dunker, Washington State University*

**Flexibility of the Activation Loop of Src**

*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*

**Spatial Microstimuli in Mechanosignaling: Mapping Mechanical Strain of an Endogenous Cytoskeletal Network in Living Endothelial Cells**

*Peter Davies, University of Pennsylvania*

**Force Transduction by Cell Cytoskeletons Involves Tyrosine Kinases and Phosphatases to Stabilize and Modify Extracellular Matrix-Cytoskeleton Linkages**

*Michael Sheetz, Columbia University*

**Regulation of Contractile Force in Tissue Constructs**

*Elliot Elson, Washington University*

**The Mechanics of Fibroblast Migration**

*Yu-Li Wang, University of Massachusetts Medical School*

*Wednesday, February 18*

8:15–10:15 AM

**Functional Neuroimaging**

**Brain Function, Chemistry and Connectivity with High Field Magnetic Resonance Research**

*Kamil Ugurbil, University of Minnesota, Chair*

**Computational Neuroimaging and Reading Development**

*Brian Wandell, Stanford University*

**Gating of K Channels by Phosphatidylinositol Bisphosphate (PIP<sub>2</sub>)**

*Nikos Logothetis, Max Planck Institute for Biological Cybernetics, Tübingen*

**Functional MRI to Probe Fast Temporal Dynamics of Functional Interaction in Neural Systems**

*Seiji Ogawa, Ogawa Laboratories for Brain Function Research, Tokyo*

8:15–10:15 AM

**Structural Dynamics of Myosin**

EPR Probes of Actomyosin Structural Dynamics

*David Thomas*, University of Minnesota, Chair

Movement of Structural Domains in Myosin

*Ivan Rayment*, University of WisconsinActomyosin Structure and Dynamics as Seen  
by Electron Microscopy*Dorit Hanein*, Burnham Institute

Site-directed Fluorescent Probes of Myosin Dynamics

*Christopher Berger*, University of Vermont

10:45AM–12:45 PM

**Structural Views into Ligand &  
Voltage Channel Gating**

Title to be announced

*Francisco Bezanilla*, University of California, Los Angeles, ChairMolecular Mechanisms of Ion Channel Gating by Cyclic  
Nucleotides*William Zagotta*, University of WashingtonMechanisms of Gating and Allosteric Modulation in  
Ionotropic Glutamate*J. Eric Gouaux*, Columbia UniversityStructural Changes in the GABA-A Receptor during  
Channel Gating*Cynthia Czajkowski*, University of Wisconsin

10:45AM–12:45 PM

**Structural Basis of Viral Pathogenesis**Assembly and Maturation of Simple Icosahedral Enveloped  
Viruses*Michael Rossmann*, Purdue University, ChairCombining X-Ray and Electron Microscopy to Understand  
Virus Assembly*Felix Rey*, Laboratoire de Genetique des Virus at CNRS,  
Gif sur Yvette

Cryo-EM Imaging of Adenovirus Cell Entry

*Phoebe Stewart*, Vanderbilt UniversityThinking Outside the Box: Nonicosahedral Virus Structure  
in Three Dimensions*Alasdair Steven*, National Institute of Arthritis and  
Musculoskeletal and Skin Diseases, National Institutes of Health**Workshops**

Sunday, February 15

7:30-9:30 PM

**Membranes on Solid Supports: Scientific and  
Nano/Technological Applications***Lukas Tamm*, University of Virginia Health Science Center,  
Chair

Interactions Between Mobile Tethered Vesicles

*Steven Boxer*, Stanford UniversityElectrical Interaction of Silicon Chips with Ion Channels  
and Neurons*Peter Fromherz*, Max Planck Institute, MartinsriedSources of Variation and Instability in Tethered Membrane  
Sensors*Bruce Cornell*, Ambri Pty Ltd, Chatswood

General Discussion I

Membrane Protein Microarrays for Drug Screening

*Joydeep Lahiri*, Corning, New York

Investigating Multivalent Binding in a Chip

*Paul Cremer*, Texas A&M University

Cellular Response Studies Employing Patterned Lipid Layers

*Harold Craighead*, Cornell University

General Discussion II

**Applied Biocomputations**

Introduction and Perspective

*J. Andrew McCammon*, University of California, San Diego,  
ChairSimulating and Refining the Structures of Supermolecular  
Complexes at Multi-Resolution and Multi-Length Scales*Jianpeng Ma*, Rice UniversityStudying the Role of Water in Protein Folding: Simulation of  
Protein Folding on the Tens of Microsecond Timescale  
Using Atomistic Forcefields and Explicit Solvation Models*Vijay Pande*, Stanford UniversityCascade of Switches in DNA Pol Beta's  
Conformational Closing*Tamar Schlick*, New York University

Atomically Detailed Simulation of Cytochrome C Folding

*Ron Elber*, Cornell UniversityBase Flipping in DNA: Accessing Millisecond Events via  
MD-based Potential of Mean Force Calculations*Alexander MacKerell*, University of Maryland,  
Baltimore County

(Continued on page 8.)

(Continued from page 7.)

### New Technology in Site-directed Spin Labeling

Title to be announced

*Christian Altenbach*, University of California, Los Angeles, Chair

Is Seeing Believing? A Determination of Structural Changes in a Membrane Transporter

*David Cafiso*, University of Virginia

Speed Control of SNARE Assembly

*Yeon-Kyun Shin*, Iowa State University

New EPR Spectroscopy Methods

*Candice S. Klug*, Medical College of Wisconsin

2D Fourier Transform ESR Methods for Studying Dynamics and Structure

*Sunil Saxena*, University of Pittsburgh

Obtaining Structural and Dynamics Information from Spin Labeled Proteins by Time Domain EPR

*Bruce Robinson*, University of Washington

Site-directed Spin Labeling by Peptide Synthesis

*Christine Karim*, University of Minnesota, Minneapolis

**Tuesday, February 17**

7:30-9:30 PM

### Polyunsaturated Lipid Membranes

*Kevin Keough*, Memorial University of Newfoundland,

*Burton Litman*, National Institutes of Health, Co-chairs

#### General Introduction to Biological Significance of PUFAs

The Function of Docosahexaenoic Acid in the Nervous System: Evidence for (Extraordinary Molecular Specificity

*Norman Salem Jr.*, National Institutes of Health

#### Physical Properties of Polyunsaturated Fatty Acids in Membranes

Insights into Polyunsaturated Lipids from Molecular

Dynamics Simulation

*Scott Feller*, Wabash College

Order Parameter Profiles, Correlation Time Gradients, and Lateral Diffusion in Polyunsaturated Membranes

*Klaus Gawrisch*, National Institutes of Health

Polyunsaturated Bilayers: What's the Difference?

*Michael Brown*, University of Arizona

*Robert Cantor*, Dartmouth College, Discussant

*Stephanie Tristram-Nagle*, Carnegie Mellon University, Discussant

#### Role of Polyunsaturated Phospholipids in Modulating Various Aspects of Membrane Function

N-3 Polyunsaturated Phospholipids Facilitate G protein-Coupled Receptor Signaling

*Burton Litman*, National Institutes of Health

A Role For Docosahexaenoic Acid in Altering Membrane Structure and Function

*William Stillwell*, Indiana University-Purdue University of Indianapolis

*Anthony Watts*, Oxford University, Oxford, UK, Discussant

*Norman Salem, Jr.*, National Institutes of Health, Discussant

### RNAi

Ancient Pathways Programmed by Small RNAs

*Phillip Zamore*, University of Massachusetts

Inhibition of Cellular and Viral Gene Expression Using RNAi

*Bryan Cullen*, Duke University, Chair

Crystal Structure and Binding Specificity of an RNA Silencing Suppressor

*Traci Hall*, National Institute of Environmental Health Sciences

Use of RNAi to Study Disease Processes

*Luk van Parijs*, Massachusetts

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\*Corresponding author must be a member at the time of first submission. Color figures must be deemed to scientifically enhance the paper.

(Continued from page 3.)

Summers' success has not gone unnoticed. "It's amazing to see what he can get done with a group consisting primarily of minority undergraduate students, and how he's able not only to teach these kids the secrets of the technologically challenging bio-NMR trade, but also to get them enthusiastic about science," Bax says.

In 2000 Summers received the U.S. White House Presidential Award for Science, Engineering and Mathematic Mentoring. He also received the 2002 William A. Hinton Research Training Award from the American Society for Microbiology for his fostering of research training of underrepresented minorities, and in 2003 he was awarded the Emily M. Gray award for mentoring from the Biophysical Society.

Although the awards are nice, Summers says that the greatest reward has been seeing his students succeed. "What gets me up in the morning are questions like what did we accomplish? What did the students find last night? Or, what are the results of the experiment we talked about? [Although,] when I look back over the years I think the thing that brings me the greatest happiness is seeing where these students have gone and how they are doing.... the excitement they now have for science."

Summers has also been involved in professional activities, including the Biophysical Society, which he joined in 2000. He recently served on the Society's Minority Affairs Committee. He credits the Society with understanding how important it is that students get involved. He stresses the importance of students and faculty attending the annual meetings because they allow scientists to interact in an informal setting, to view science across a variety of disciplines, and "the meetings create an environment that

could stimulate ideas for your own research," he adds. "The meetings are held in great locations where people can go out, relax, and talk about science. I think that this is a very important function of the Biophysical Society."

While his career is a significant part of his life, he has been able to maintain



Mike Summers (top left) with students (l to r) Jing Zhou, Anwasha Dey, and Isaac Kinde.

a balance between work and personal life. Married to Holly Summers, who is a dentist, Summers also has a daughter Samantha. He claims there have been no serious challenges to being "Dad" and "Dr. Summers." "My wife and I split things up as much as possible between us," he explains. Every Saturday when Samantha was a baby, he would take her to the lab with him. Now that she is 12 and no longer needs to come to work with him, he makes sure that he is there for her in other ways. The practice of waking before the sun on the dairy farm prepared him for his now habitual custom of being in the lab by 6:00 am. This means that he is the first one up in the morning at home,

so he makes sure he is home in time every evening to make dinner. "I only have one daughter," he explains, "I can't say 'Oh, I'll spend time with the next one'." He would encourage women not to feel as if they have to choose between a career in science and a family. He feels it is possible and important to have both.

In addition to spending time with Holly and Samantha, he loves to ride his mountain bike several times a week and on weekends. He loves a challenge and is not afraid to test his physical limits. "Mike reacts faster than any one to an opportunity," says Bax, "and rarely will lose out if a project turns out to be competitive. He displays the same fighter characteristics in sports, and challenges his group members and colleagues to mind-

numbing bike rides, followed by 50 push-ups, if any manage to stay with him. If, after too many late nights in the lab and insufficient time to practice

he does not feel strong enough to take me on in an honest uphill bike ride, he'll challenge me to a downhill race instead, preferably on a narrow trail through the woods!"

Though far from his parents who have retired in Florida, he is still gets to see them for several months each year. Tom and Ruth have a recreational vehicle and now visit regularly. In fact, the family is so close that Summers has installed an RV hook up so his parents can feed directly into his house's electric and sewer lines.

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**"Each year, for a program that has 50 open slots, we get over 1500 applicants, mostly from Maryland. Imagine the national potential."**

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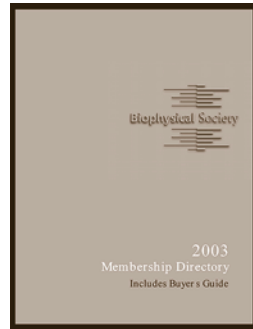
(Continued on page 10.)

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Summers' career has taken off in directions he could not have imagined, while his personal life has helped him maintain balance. As a scientist and educator he has made immeasurable contributions and has followed in the footsteps of his mentors who thought it important to inspire him. Harbowski says, "It is rare to find someone like Michael Summers, who combines the achievements of an exceptional research scientist with equal dedication to students, both undergraduate and graduate, especially those from minority backgrounds. It is no exaggeration to say that he has become a hero to many of his students."

### Additional 2003 Biophysical Society Members

The members listed below renewed their 2003 membership or joined after the publication of the 2003 Directory of Members.



- Thomas O. Baldwin*, University of Arizona
- Hermann Bibler*, University of Karlsruhe
- Jonathan W. Essex*, University of Southamton
- LeRoy Hood*, Institute for Systems Biology
- Reinhard A.F. Reithmeier*, University of Toronto
- Bernat Soria Escoms*, University of Miguel Hernandez
- Hidetada Yoshida*, New York University School of Medicine
- Miriam M. Ziegler*, University of Arizona

## Opportunities

### Burroughs Welcome Fund, Career Awards Program in the Biomedical Sciences

Up to 12 fellowships support postdoctoral researchers in the biomedical sciences. Designed to bridge advanced postdoctoral training and early years of faculty service. During the postdoctoral period, award recipients may train at institutions in the United States, Canada or the United Kingdom. Deadline for applications are October 1, 2003.

For more information, please visit [www.bwfund.org](http://www.bwfund.org).

### British Council, Marshall Sherfield Fellowships

Up to two postdoctoral fellowships are awarded for science or engineering research at any British university or research institute. Awards are for one to two academic years. Application deadline is October 10, 2003.

For more information, please visit [www.marshallscholarship.org/](http://www.marshallscholarship.org/).

### National Human Genome Research Institute (NHGRI), Individual Mentored Research Scientist Development Awards

This 3-5 year award includes a basic science component and intensive research experience. Open to scientists at all career levels. Applicants must demonstrate a commitment to pursue a career in genomic research. Deadlines to submit an application for this award are October 1, 2003, February 1, 2004, and June 1, 2004.

For more information, please visit [www.genome.gov/](http://www.genome.gov/).

## Subgroups

### Membrane Structure and Assembly

The 2004 Membrane Structure and Assembly Subgroup Meeting will be Saturday, February 14, 2004 at the Annual Biophysical Society Meeting in Baltimore.

### Looking for Lipid Rafts

The 2004 meeting will consist of seven speakers who will give 20-minute talks followed by 10 minutes of discussion and a 30 minute break for all participants. All speakers will be describing techniques that can be used, in principle, to investigate lipid and protein lateral heterogeneity in membranes—a topic of commanding interest with the advent of the notion of rafts. The putative rafts are of basic interest to biophysicists studying membrane lateral organization and to biologists who need to know the functional consequences of lateral organization. However, the raft field is at a technical impasse because there is no unambiguous structural correlate of the biochemically defined raft. Different methods give different answers. This is because the membrane is an ordered two-dimensional liquid for which we are still developing the appropriate means of investigation. Moreover, various biological functional models are proposed based on the operational, biochemical definition of rafts. Not having a structural correlate leads many to be skeptical of exactly what is a raft. This subgroup meeting will therefore focus on the techniques that can be used—their advantages and limitations. The meeting will be a precursor to a more

lengthy Biophysical Discussion that will take place in October of 2004. A unique feature of the Subgroup Meeting, suggested at last year's meeting, will be a panel of distinguished discussants who will lead off the question period following each talk.

### Meeting Organization

#### Molecular Dynamics

*Larry Scott*, Illinois Institute of Technology

#### AFM/Model Membranes

*Linda Johnston*, National Research Council, Steacie Institute of Molecular Science

#### NMR

*Klaus Gawrisch*, NIH

#### Single Particle Tracking

*Aki Kusumi*, University of Nagoya

#### Fluorescence Correlation

*Nancy Thompson*, University of North Carolina

#### FRET & FRAP

*Anne Kenworthy*, Vanderbilt University

#### Electron Microscopy

*Bridget Wilson*, University of New Mexico

### Discussants

*Mike Saxton*, University of California, Davis

*Watt Webb*, Cornell University

*Gerrit van Meer*, University of Utrecht

*Jennifer Lippincott-Schwartz*, NIH

*Ken Jacobson*, Subgroup Chair, University of North Carolina

## Membrane Biophysics

### 2004 Cole Award and Dinner

The Membrane Biophysics subgroup is soliciting nominations for the Kenneth S. Cole Award. This award is given annually to an investigator who has made a substantial contribution to our understanding of membrane biophysics. The award will be presented at the subgroup dinner, following the Saturday, February 14, afternoon symposium. Please note that any member of the Membrane Biophysics subgroup may nominate someone, and the recipient will be selected by the Group Chairman and Advisory Committee. Nominations, containing a brief reasoned statement of the qualifications of the nominee, should be received by November 1, 2003.

Nominations may be sent to the Chair (Colin Nichols), Advisory Committee (Lynne Quarmby, Robert French, Barbara Ehrlich and Debbie Nelson), or the subgroup Secretary/Treasurer (Bill Wonderlin).

To encourage participation in the subgroup, any student member of the Biophysical Society entering the student poster competition will receive a free ticket to the Cole dinner. Additional free tickets will be available on a lottery basis to student members who do not enter the poster competition. The deadline for requesting student tickets is January 30, 2004.

—*Colin Nichols*, Chair

[cnichols@cellbio.wustl.edu](mailto:cnichols@cellbio.wustl.edu) and

*Bill Wonderlin*, Secretary-Treasurer,

[wonder@wvu.edu](mailto:wonder@wvu.edu)

## Public Affairs

### The August Recess

By tradition and by law, Congress recesses each year for the month of August. During the Senate's early years, members attempted to adjourn in the spring, before the Washington summer's heat and oppressive humidity overwhelmed them and their small staff. When the Senate moved to its current chamber in 1859, senators were optimistic about its "modern" ventilation system, but they soon found the new system ineffective. Long sessions were plagued by hot and stormy weather. The 1920s brought "manufactured weather" to the Senate chamber, but even modern climate control could not cope with the hottest days, forcing 20th-century senators to escape the summer heat. In 1970, finally facing the reality of long sessions, Congress mandated a summer break as part of the Legislative Reorganization Act. Today, the August recess continues to be a regular feature of the Senate schedule—a chance for senators to spend time with family, meet with constituents in their home states, and catch up on summer reading.

### Federal Appropriations in for Tough Funding Year

August is traditionally the month in which Congress adjourns so Members can spend quality time at home, during a "legislative work" session. This year, anxious to not repeat the FY 2003 fiasco with multiple continuing resolutions (CR), Congress has vowed to push through the toughest of spending bills.

September will be "appropriations month," and Senate Majority Leader Bill Frist (R-TN) said the enormous

\$138 billion FY04 Labor-HHS spending bill is expected to be the first out of the gate when the Senate reconvenes September 2. The wide-ranging measure has been known to attract hundreds of amendments and take weeks of floor time. "It's going to take some strong, strong leadership, because it can be a complex, contentious piece of legislation," Frist said. But Senate Labor-HHS Appropriations Subcommittee Chairman Arlen Specter (R-PA), is "ready to go" with the measure, Frist added.

The Senate has completed only four of its 13 must-pass FY04 appropriations bills, including the Defense, Military Construction, Homeland Security and the Legislative Branch funding measures. Keeping to the constraints of the budget, Republican leaders are heavy with the discipline, despite Democratic attempts to increase spending by raising the limits set by the budget resolution.

Additionally, the NIH saw longtime champions Senators Arlen Specter (R-PA) and Tom Harkin (D-IA) joined by colleague Dianne Feinstein (D-CA) introduce an amendment that would

raise the FY 2004 NIH budget by \$1 billion. Unless the Administration and Congressional leaders step in, the NIH is likely to see the smallest increase in a decade. This will confirm fears about the "soft landing" and make federally funded biomedical research much more difficult in the coming years.

### NIH Establishes Steering Committee to Streamline Decision Making

NIH Director Elias A. Zerhouni announced the formation of a Steering Committee intended to streamline the NIH decision making process. Membership on this new committee will consist of 10 of the 27 Institute and Center Directors. The idea is to have the committee provide "crisp strategic direction" to the entire agency. Zerhouni will chair the committee.

"Leading the NIH requires a team approach that advances the agency's mission as efficiently as possible," Zerhouni said. "Over the past nine months, through extensive consultation with all of the Institute and Center



*From left to right: Director of the Division of Cell Biology & Biophysics of NIGMS, James Cassatt, PhD; Ken Dill and Mary Barkley, Public Affairs Committee Co-Chairs; NIH Director Elias Zerhouni; and former U.S. Representative John Porter, meeting about the Bridging the Sciences initiative.*

Directors at NIH, we have looked carefully at how to better organize ourselves. As a result, I established the steering committee to address the complex issues facing us.”

The three largest institutes of NIH—NCI, NHLBI, NIAID—will retain permanent seats. The other seven members will be chosen to represent the remaining institutes. These members will serve three-year terms on a staggered, rotating basis. The initial membership will be as follows: Francis Collins, M.D., Ph.D., National Human Genome Research Institute; Richard Hodes, M.D., National Institute on Aging; Stephen Katz, M.D., Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases; Donald Lindberg, M.D., National Library of Medicine; Stephen Straus, M.D., National Center for Complementary and Alternative Medicine; Lawrence Tabak, D.D.S., Ph.D., National Institute of Dental and Craniofacial Research; and Nora Volkow, M.D., National Institute on Drug Abuse. Zerhouni will chair the committee as NIH Director, and Deputy NIH Director Raynard Kington, M.D., Ph.D., will serve as an ex-officio member and chair the committee in the absence of the NIH Director.

## NSF Congressional Update

The topsy-turvy nature of federal appropriations is more an art than a science. While some Members of Congress look at the NIH’s relatively strong level of funding and have opted to discontinue funding there, a new favorite agency has emerged—the National Science Foundation (NSF).

On Thursday, July 15, the House Veterans Affairs and Housing and Urban Development and Independent

Agencies Appropriations Subcommittee (VA-HUD) marked-up its FY 2004 bill and provided NSF with \$5.689 billion, a \$329.1 million (6.2 percent) over FY 2003.

Several subagencies within NSF were specifically urged to receive funding, including the Major Research Equipment and Facilities Construction (MREFC), the Network for Earthquake Engineering Simulation, the South Pole Station Modernization, and the National Ecological Observatory Network. Additional funding was also added to the Terascale Computing Systems; EarthScope; IceCube Neutrino Detector, and the Integrated Ocean Drilling Program.

At the mark-up subcommittee members noted the difficulty they had in meeting the needs of the various agencies given the small allocation they had to work with. Chairman Walsh noted that NSF’s increase, though larger than other agencies, was not what he had hoped. It is likely that the strong coalition of science and health related organizations will attempt to duplicate the NIH’s recent success in doubling its budget for the NSF.

## OMB A-76: Competitive Outsourcing at the NIH

For most of the 108th Congress, there has been some high-level, albeit quiet discussion about the Office of Management and Budget’s A-76 Circular to the HHS.

OMB’s competitive outsourcing project, detailed in the revised Circular A-76, initially set a goal of putting 15% of the federal government’s “commercial” positions up for competition with the private sector by September 2003. Through this process, the NIH was instructed to review and reduce its commercial functions by the end of FY 2004 by 23 percent.

Recently, in testimony before the Senate Governmental Affairs/Oversight of Government Management, the Federal Workforce & DC Subcommittee, a deputy at OMB stated, “OMB has revised the criteria that will be used to grade agency progress. The revised criteria...contain no government-wide numerical goals that would require an agency to compete a portion of the commercial activities performed by the government.”

Certainly, this has alleviated many concerns about NIH personnel, but it still requires that the NIH determine which jobs to be put for competition. Literally hundreds of jobs will be affected by the initiative. In a report accompanying the testimony, OMB stated that HHS had to determine which of the 31,400 of its 64,900 full-time equivalents may be considered “commercial” in nature. Of these positions, 11,200 may be placed for competition.

The report continued that HHS and OMB had agreed to place 2,510 jobs up for competition and that it would justify upgrading the department’s management scorecard. Positions listed as eligible for competition include “library services, building maintenance, grants administration support function and graphic design.”

## House Science Committee Clears Bills Before Recess

Just before adjourning, the House Science Committee approved six pieces of legislation. Commenting on the success of passage, Chairman Sherwood Boehlert (R-NY) said, “These six bills will protect the environment, improve education, increase air passenger safety, prevent fires, enable buildings to better withstand earthquakes and enable NASA to con-

*(Continued on page 14.)*

(Continued from page 13.)

duct its business more efficiently and effectively. Not bad for a day's work."

Introduced by Representatives Randy Forbes (R-VA) and Edolphus Towns (D-NY), H.R. 2801, the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2003, would address the "digital

divide" - the disparity in access to technology between whites and minority populations. The bill would establish a \$250 million per year grant program within the Department of Commerce's Technology Administration, to strengthen the ability of Minority Serving Institutions (MSIs) to provide instruction in digital and wireless network technologies.

The other bills were entitled: NASA Flexibility Act of 2003;

Federal Aviation Administration Research and Development Reauthorization Act; Harmful Algal Bloom and Hypoxia Research Amendments Act of 2003; National Earthquake Hazards Reduction Program Reauthorization Act of 2003; and United States Fire Administration Authorization Act of 2003.

Upon Congress' return, the House of Representatives will take up these Science Committee bills.

## Placement Service

During the Annual Meeting in Baltimore, the Placement Service is fortunate to have Ed Bocko, Jr. of PROTRAN Resources join the placement center team. Bocko will lead seminars and forums in the placement center throughout the meeting. In addition, he will provide one-on-one sessions to review and rework resumes. Seminars include *Interviewing 101*, *Business Correspondence*, *Ways to Make a Great First Impression*, *Goals for Each Step in the Job Search*, *Uncovering the Hidden Job Market*, and *Career Transitions Away from Bench Science*. In addition, Bocko will give a seminar discussing his own path in becoming an HR consultant. A full schedule of events will be listed in the annual meeting printed program.

All those registered for the placement center may use Bocko's services at no charge. Openings for the one-on-one resume work fill quickly, so register early prior to the meeting to secure a spot. Post your CVs online and register before the meeting to avoid registration lines. Don't miss the wonderful opportunities offered this year. Join us this winter in the Placement Center. See you in Baltimore!

### CAREER DEVELOPMENT WORKSHOPS/PLACEMENT CENTER

#### *RESUME One-on-One Critiques*

20-minute reserved sessions for critiques of CVs, resumes, and letters as well as discussion of any and all employment related issues or questions.

#### *Interviewing 101*

A general "how to" interview class for those looking to hone their skills or simply learn the basics of a proper interview. Also a street-smart guide of what to do and what not to do as you meet a would-be employer.

#### *Resumes and Business Correspondence: Cover Letters, Broadcast Letters and Follow-Up Letters*

The incredible importance of developing a powerful CV or resume cannot be overstated. Most job searchers earn the opportunity to meet with decision makers on the basis of

"paper" review; many lose the opportunity due to decision makers' interpretation and analysis of the CV/resume. In this session, participants will explore "art and science" of the process of "crafting" an accurate, honest, and powerful document which represents the knowledge, skills and abilities you possess. Also, an introduction and discussion of the importance of professional business correspondence within the career search arena. Participants will learn proper correspondence formats as well as a "formula" for simple, but effective, letter content.

#### *ED's TOP TEN: Ten Ways to Ensure a Positive and Lasting First Impression in the Employment Arena*

This seminar will include presentation and discussion of

(Continued on page 21.)

**Biophysical Society Ballot Nomination Form**

Society bylaws allow for members to run for Council by petition. To be considered for the 2004 ballot, nomination forms must be received in the Society Office by October 3, 2003.

Nominee: \_\_\_\_\_

Present Title/Department/Institution: \_\_\_\_\_

Nominee Biographical Data: Highest degree: \_\_\_\_\_ Year received: \_\_\_\_\_

Discipline/Field: \_\_\_\_\_

Institution where degree was received: \_\_\_\_\_

Research Interests & Experience: \_\_\_\_\_

Previous Biophysical Society experience (Officer, Executive Board, Council, Editor, Committee Chair or Member, Subgroup Chair, etc.): \_\_\_\_\_

The undersigned members of the Biophysical Society hereby nominate \_\_\_\_\_  
for the office of \_\_\_\_\_

Signature	Typed Name
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____

If I am elected to the office of \_\_\_\_\_, I agree to serve and to attend Council meetings as described in Article VIII of the Bylaws. My reason for running for the office is: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mail or fax completed form to:  
Biophysical Society  
9650 Rockville Pike, Bethesda, MD 20814-3998  
Fax: 301-634-7133

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The Society gratefully acknowledges the many 2003 members listed on the following pages who made donations to Society programs. The donations allow for growth each year in Student and International Travel Grants, Public Affairs, Awards, and other outreach activities.

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Ishida, Hideyuki	Kipp, Brian	Lehman, Steven	Martinez-Francois, Juan
Ishii, Toshiaki	Kirk, William	Lehnart, Stephan	Marunaka, Yoshinori
Isom, Lori	Kirschner, Leonard	Lehrer, Sherwin	Mathews, Antony
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Jiang, Yi	Knutson, Jay	Lindemann, Charles	McLaughlin, Stuart
Jiang, Meei	Kobayashi, Toshihide	Linsdell, Paul	McManus, Owen
Jin, Jian-Ping	Koch, Bruce	Lipicky, Raymond	McQueen, Alfred
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Smith, Jerry	Taulier, Nicolas	Villalba-Galea, Carlos	Wright, Ernest
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 Yount, Ralph  
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Yurke, Bernard  
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 Zhu, Yongling  
 Zicha, Stephan

Zimm, Bruno  
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*(Continued from page 14.)*

ten critical, not-always-obvious, career search activities that enable the job seeker to establish a positive and lasting first impression with an employer.

***Your Job Search: A Sequential Process with Different Goals at Each Step of the Way***

The job search isn't simply a process of sending out hundreds of CVs and waiting for offers to pour in. It is comprised of several small steps, and each step has its own set of challenges. Join us as we discuss them and answer questions about your own job search experiences.

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Is there a way to move your skills from the bench to a related career? There is, assuming one is focused and willing to invest some time in making the switch. We will explore different paths to alternative scientific careers.

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This is your opportunity to explore the myriad myths and realities of the recruitment process, employment, and career strategies that work. Ask about ways to impress potential employers, deal with employment agencies, accept, or decline, offers, prepare for interviews and phone screens, select and 'prepare' references ..... any and all questions on the topic are "fair game"!!

***My Journey to Becoming an HR Consultant in the Biotech/Life Sciences Arena***

A virtual 'walk' through my own career journal with 'lessons learned'.

**CAREER DEVELOPMENT WORKSHOP LEADER**

ED BOCKO, JR. is Managing Director of PROTRAN Resources Inc., a human resources consulting practice founded in 1985 and based in Sharon, Massachusetts. He designs and implements training, recruiting and outplacement programs, primarily in the biotechnology and high technology arenas. Bocko has also served as a contracted recruiter for biotech/industrial companies including Alnylam, Brock Rogers/Endovia, Biogen, Inc., RepliGen, Inc., Gene-Trak, Inc., Serono Laboratories, Inc., Pfizer Central Research, Inc., and Genzyme, Inc. Bocko has been a featured seminar/workshop speaker at several national and international scientific meetings.

## Ask Professor Sarah Bellum

Professor Sarah Bellum answers your questions on navigating the often-uncharted waters of early career development. Professor Bellum was inspired by Ms. Mentor, a column by *Emily Toth* appearing in *The Chronicle of Higher Education*, and is written by *Patricia L. Clark*, chair of the Early Careers Committee. Do you have a question for Professor Bellum? Send it to [sarah\\_bellum@biophysics.org](mailto:sarah_bellum@biophysics.org). Your privacy is assured!

**Q:** *I knew ahead of time that the lab I joined works in a very competitive field, but the competitiveness seems to carry over to how people in the lab relate to one another. For example, I just presented my work at lab meeting, and I can't believe the abuse I received! The worst of it came from my labmates, but my advisor did nothing to step in and stop it. I didn't decide to go to graduate school to have my ideas dismissed, my hypotheses scoffed at, and my experiments picked apart. I was really excited to start graduate school, but now I think it may not be for me.*

*--Scorned in Cincinnati*

**A:** Every lab does have a distinct personality, and this can range from warm-and-fuzzy ("Let's all bake cookies for each other's birthdays!") to outright mistrust ("I label my reagent bottles with a code, rather than the contents, to make sure my labmates can't use my buffers."). Lab personalities are often determined largely by the personality of the PI, with significant influence from the personalities of the senior students/postdocs/scientists; as a result, how people in the lab relate to one another can and will change over time, but probably will not undergo a dramatic transformation. So it is possible that you have joined a lab with a personality that is more cutthroat than your own personal makeup.

It is certainly possible to succeed in a laboratory that has a personality that is very different from your own, but keep in mind that being in such an environment will probably be more stressful than being in an environment that more closely matches your own personality. After all, lab work means long hours together with your labmates, in close quarters, over several years, so personality mismatches that

may seem minor under other circumstances are greatly amplified by these conditions.

Also keep in mind that the time to discover your lab's personality is when you are rotating through it, or interviewing. But do not expect to learn about lab personality from the PI! Many PIs are not at all aware of the subtleties of their lab's interpersonal dynamics. Or if he/she is aware, the

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**“Lab personalities are often determined largely by the personality of the PI, with significant influence from the personalities of the senior students/postdocs/scientists...”**

---

information may be out-of-date or inaccurate (seen, perhaps, through the rosy glaze of how the PI hopes people are getting along, rather than how they actually are getting along). Instead, talk to the lab members them-

selves: individually, and out of earshot from their labmates and the PI, most people will provide an accurate impression of the lab. But do make sure you talk to several

people to make sure you have heard from someone other than the lab Pollyanna (or pessimist). Even better, try to attend a few regular lab meetings;

these often provide a clear window into lab relations.

But it is also possible that you are having nothing more than a very normal reaction to your first few lab meeting presentations: intense defensiveness. After all, you are describing a project about which you care deeply (or at least, on which you have devoted a large amount of time), to a group of people you may still not know very well. And, you are describing decisions you have made about experimental planning, project direction, etc., so it is easy to feel like any negative comments are attacks on you and your judgment.

But the receipt of constructive criticism is perhaps the most important element of lab meetings! After all, this is the home crowd: these are the people you want tearing apart your experiments (for example, identifying that control you forgot to include!), before you go off and talk about your work

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**“...the receipt of constructive criticism is perhaps the most important element of lab meetings!”**

---

with people outside the lab. Your labmates have a familiarity with the ins and outs of your project that put them in an ideal position to offer excellent suggestions and effective criticism.<sup>1</sup>

In fact, it could be argued that a much worse scenario arises when the lab

meeting crowd is too complacent, willing to soak up whatever you are saying, without ever applying a critical filter. If lab meeting were merely a pep rally for your project, how would you learn to defend your ideas and experimental approaches? What would motivate you to work out an elegant control experiment to satisfy the skeptics? Quality, constructive criticism at group meeting will help you when it comes time to draft a manuscript reporting your results: you need to know the red flags your studies raise in peoples' minds, so you can construct the arguments to allay these concerns before the manuscript goes out for review.

Your lab may be more critical than most, since it does work in a very competitive field. Your advisor and senior labmates are probably used to having their talks and poster presentations closely scrutinized by the competition at the big national/international meetings. This is good; the scrutiny at lab meeting

will keep you on your toes now, and help prevent you from feeling dissected when you are the one up in front of the outside audience.

Keep these points in mind the next time you present, and remember: in a well-managed lab, the criticism is directed only at the project, and never at the presenter.

N.B.: It is never a good idea to use a code to label your reagent bottles, no matter how inhospitable your laboratory environment. Even if you remember what is in each bottle, in an emergency (like if one of those bottles breaks), if you are not around, it is important that your labmates be able to identify the contents and clean up the mess appropriately.

<sup>1</sup> For more information on the elements of productive lab meetings, check out the following article published by the Women in Cell Biology (WICB) committee of the American Society of CellBiology(ASCB):

<http://www.ascb.org/news/vol21no7aug/wicb.html>

## 2004 Biophysical Discussions October 28—31, 2004 Asilomar, California

### Probing Membrane Microdomains

The Organizing Committee :

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Interested participants may apply beginning March 5, 2004 at

[www.biophysics.org](http://www.biophysics.org).

*Application Deadline: May 15, 2004*

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## 2004 Annual Meeting Deadlines

**Abstract Submission**  
*October 5*

**International Travel Applications**  
*October 5*

**Student Travel Application**  
*October 5*

**SRAA Poster Competition**  
*October 5*

**MARC Travel Award Applications**  
*October 5*

**Abstract Revision**  
*October 10*

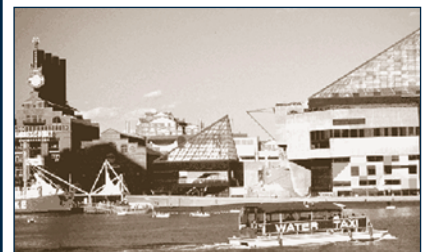
**Abstract Withdrawal**  
*October 27*

**Student Housing Reservations**  
*November 7*

**Special Equipment Reservation**  
*December 1*

**Early Registration**  
*December 12*

**General Housing Reservations**  
*January 5*



## Upcoming Events

**October 1–4, 2003**

*American Physiological Society Conference: Understanding Renal and Cardiovascular Function through Physiological Genomics*

Augusta, Georgia

<http://www.the-aps.org/>

**October 2–5, 2003**

*Society for Advancement of Chicanos and Native Americans in Science (SACNAS) 30th Anniversary National Conference*

Albuquerque, New Mexico

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

**October 26–30, 2003**

*American Association of Pharmaceutical Scientists (AAPS)*

*Annual Meeting and Exposition*

Salt Lake City, Utah

<http://www.aapspharmaceutica.com/>

**November 1–5, 2003**

*The 24th Congress of the International Association for Breast Cancer Research*

Sacramento, California

<http://www.cme.ucdavis.edu/iabcr.htm>

**November 3–8, 2003**

*Third International Symposium on Slow Dynamics in Complex Systems*

Sendai, Japan

<http://www.ifs.tohoku.ac.jp./slow-dynamics/>

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