

Newsletter

Biophysical Society

MAY

2013

DEADLINES

Mechanobiology of Proteins and Cells

September 29–
October 3, 2013
Salisbury Cove, Maine

June 10, 2013
Abstract Submission

July 8, 2013
Early Registration

Wiki-Edit Contest

July 15, 2013
Article Submission

SAVE THE DATE

58th Annual Meeting

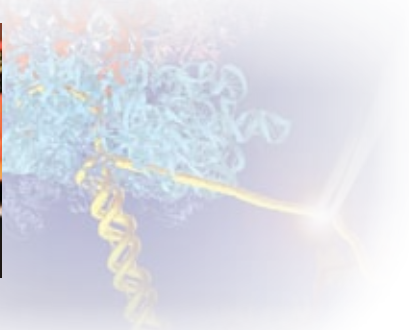
February 15–19, 2014
San Francisco, California

Carlos Bustamante, 2014 National Lecturer

Carlos Bustamante, University of California, Berkeley, has been named the 2014 National Lecturer. Bustamante will present his lecture, *A Journey Through Cellular Processes: One Molecule at a Time*, at the Biophysical Society 58th Annual Meeting, which will be held in San Francisco, California, February 15–19, 2014.



Carlos Bustamante



Summer Course Grant Renewal Awarded

NIGMS recently awarded the Biophysical Society grant funding the Summer Course in Biophysics for the next five years. This 11-week summer program for minority undergraduate students began in 2008 and was fully-funded by an NIGMS training grant. After five successful

summers, co-PIs *Michael Jarfster*, and *Barry Lentz*, both from the University of North Carolina, Chapel Hill, applied to renew the grant, requesting funding for the course from 2013–2018. The 2013 Summer Course will begin in Chapel Hill, North Carolina, on May 14.

Wiki-Edit Contest

Expert in your area? Share that knowledge with the world!

The Biophysical Society is sponsoring a Wiki-Edit Contest with the aim of improving Wikipedia content on biophysical topics. Choose a topic and create or edit an article by July 15. Six winners will receive a \$100 cash prize, membership and registration for 2014 BPS meeting in San Fran-

cisco, a "Barnstar" award from WikiProject Biophysics, and a dinner with other BPS wikipedians at the Annual Meeting. Visit www.biophysics.org and click "Awards/Opportunities" then "Society Contests."

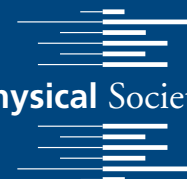


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Biophysical Society



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Biophysicist in Profile

CHRIS YENGO

Chris Yengo's path to biophysics might be less traditional than some, starting in exercise science as an undergraduate and eventually leading into molecular physiology and biophysics. No doubt influenced by his parents, both teachers, and his early acclimation to the world of athletics through his football coaching father, Yengo closely associates science and sports, "since the competition motivates you to perform at your best and find ways to improve."

While working on his master's degree in exercise physiology at the University of Wyoming, Yengo had his first research experience. "Working with *Paul Thomas*, we studied the combined impact of myocardial infarction and exercise in a rodent model," he explained. The results led to an abstract that was selected for a platform presentation at a national meeting, and after attending and presenting, Yengo was hooked on pursuing a career in biomedical research. He headed to the University of Vermont to work on his PhD in physiology and biophysics.

"Science has many parallels to athletics, since the competition motivates you to perform at your best and always find ways to improve."

— Chris Yengo

PhD studies immersed Yengo in a highly collaborative environment focused on molecular motors and cell motility research. Working with *Chris Berger* as Berger established his lab, Yengo developed skills in molecular biology, protein expression/purification, and fluorescence spectroscopy. "It was a very exciting experience," Yengo said, "because there were many labs working on studies related to muscle contraction, molecular motors, and cytoskeleton." Working in Berger's

lab helped spark his interest in the structural properties of motors and his fascination with how they convert chemical energy into mechanical work.

His background in physiology led him to a postdoc position with *Lee Sweeney* at the University of Pennsylvania's Pennsylvania Muscle Institute, where he studied the structure and function of non-muscle myosins. "Lee was an outstanding mentor and provided many opportunities for me to develop new skills," said Yengo. "I was also particularly fortunate to work with other talented postdocs and mentors, including *Enrique De La Cruz* and *Carl Morris* (the former) and *Mike Ostap* and *Yale Goldman* (the latter)."

Currently, Yengo is an associate professor of cellular and molecular physiology at Penn State College of Medicine, in Hershey, Pennsylvania, where he also serves as the co-director of an integrated basic science course for first year medical students. His interest in class III myosins in sensory cells, developed during his time in the Sweeney lab, led to the two main themes of his independent lab's current research. "First, we are examining the conserved mechanism of force generation used by myosin motors," Yengo explained. To do this, his lab is site-specifically labeling myosin V with fluorescence probes at locations that allow examination of key conformation changes in the motor ATPase cycle. The second theme is

to characterize myosin motors that function in non-muscle cells using biochemical, biophysical, and cell biological approaches. “We are currently investigating class III myosins, involved in hearing and vision,” Yengo said. “Long term, I would like to determine the role of class III myosins in sensory cells and design therapies to prevent retinal degeneration and hearing loss.”

During his graduate student days, Berger introduced Yengo to *David Thomas*, Berger’s former mentor. “Chris introduced me to Chris,” joked Thomas. Yengo and Thomas have great respect for one another, with Yengo admiring Thomas for his “incredibly productive research that has contributed tremendously to biophysics in technology development and novel research findings.” Yengo considers himself fortunate to be collaborating with Thomas’ postdoc, *Joe Muretta*, in a study involving transient structural kinetics of myosin V. “Chris is a fearless scientist who tackles difficult problems, such as expressing mutants of brain myosin in insect cells, attaching multiple fluorescent probes, then detecting transient structural changes during enzyme action,” said Thomas. “Not many people would think to try this sort of thing.”

Over his academic career, Yengo has faced the challenges of balancing research time with teaching and other responsibilities. Starting his independent career at the University of North Carolina, Charlotte, he joined a team of scientists who were developing an interdisciplinary PhD program in biology, including biology, chemistry, physics, and bioengineering. “They wanted to hire a biophysicist who could work with other disciplines to build the program,” Yengo explained. “It was rewarding to develop a biophysics course for both graduate and undergraduate experiences.”

Yengo considers mentoring students at all levels an important part of his career. For the past three years, he has participated in the American Heart Association’s Summer Undergraduate Research Fellowship (SURF) program at Penn State, a course where undergraduate students work in the lab for 12 weeks over the summer, while being mentored by Penn State faculty. “Each student I mentored accomplished a great deal and went on to attend the Biophysical Society Annual

Meeting the following year,” Yengo said. “It is rewarding to see a student get excited by their progress in research, and then attend the meeting to get a perspective on the tremendous developments in biophysics research.”

Another rewarding aspect of Yengo’s career is the opportunity to collaborate with other researchers in the field. “Colleagues in biophysics are very generous about sharing ideas and working together to address problems,” Yengo reflected. He has benefited from much collaboration, including working with *Bechara Kachar*, NIH; *Jim Sellers*, NIH; and *Don Jacobs*, UNC Charlotte. “Many researchers from different backgrounds have converged on biophysical questions,” said Yengo. “It is refreshing to discuss your research areas with colleagues from completely different backgrounds.”

Yengo’s appreciation of collaboration motivated him to organize a Biophysical Society Local Networking Event at his university in November 2011. With the help of *William Hancock*, Penn State, *Dimitrios Vavylonis*, Lehigh University, and *Ekaterina L. Grishchuk*, University of Pennsylvania, the event continued in 2012 (at Lehigh University) and will take place again in September 2013 at Penn State.

In addition to organizing the local event, Yengo served as co-chair with *Mihály Kovács* for the Motility Subgroup symposium at the 2013 Biophysical Society Annual Meeting. “The Biophysical Society is a great organization that fosters the development of biophysical research and provides outstanding opportunities for researchers/educators to present their work, network, and collaborate,” said Yengo.

Outside of the lab, Yengo enjoys spending time with his 13-year-old son Jack, wife Amy, and dog Charlotte, as well as cycling to work, golfing, fishing, and completing triathlons and other races. If not for biophysics, his enthusiasm for fitness and background as a wrestler might have led him to an alternate career path as a high school science teacher and coach. “I thoroughly enjoy visiting my son’s classroom each year,” Yengo said. “The students get a chance to experience things like liquid nitrogen and discuss material properties and the states of matter.”



Yengo with his wife Amy, son Jack, and dog Charlotte.

Careers

Broaden Your Horizons in a Career Outside the US

Keeping with the international profile of the Biophysical Society, the Early Careers Committee organized the panel, *Early Careers Outside the US*, at the 2013 Annual Meeting with scientists from around the world discussing professional opportunities in their respective countries. The panelists, including *Ben Corry*, Australian National University, *Neelanjana Sengupta*, National Chemical Laboratory, India, *Leandro Barbosa*, University of Sao Paulo, Brazil, and *Soren Preus*, Aarhus University, Denmark, gave attendees a broad view of international opportunities.

Australia

Corry highlighted that titles for scientific positions differ from those in the US—for example, a senior lecturer in Australia is similar to a professor in the US (tenure included)—important to keep in mind while searching and applying for jobs.

As a smaller country, the population of scientists is also proportionally smaller. Considering this, Australia has done well in the average number of papers per scientists, average number of citations, and other markers of scientific productivity. Still, it can be tougher to break into a smaller market, where there are fewer groups of scientists working in each research area.

There are two ways to get a postdoc in Australia. One is similar to the process in the US: get hired by a PI, which can be done by researching interesting professors and reaching out to them. The other, not available in the US, is through a fellowship funded by the Australian government. You essentially write a grant proposal to cover your own salary. Having the support of a professor you would like to work with while writing your grant is necessary. Whichever way you get a job, salaries tend to be good, even at the postdoc level, and working conditions are very good. Postdocs in Australia are considered full-time staff and get appropriate benefits.

The market in Australia is quite competitive, and though it is opening to international applicants, it is not fully accessible. The Australian Research Council is totally open, while the National Health and Medical Research Council is slowly beginning to accept more international applications. If you are looking for industry positions, it can be more difficult, as there are not many large companies doing research in Australia. There is also a smaller number of start-ups in the biotechnology sector than in the US.

Brazil

Jumping continents to Brazil, Barbosa describes a country that has recently undergone many changes, opening 20–25 universities in the past several years. New universities have led to increased opportunities for young people looking for postdocs—there are always postdoctoral positions open, according to Barbosa. Brazil is working on encouraging collaboration and boosting productivity. Brazilian President *Dilma Rousseff* recently instituted a fellowship program awarding students one-year research grants to go abroad and study if they agree to return to Brazil to aid in scientific development at home.

To apply for a position at a public university, you will need to take an exam, and your credentials will be reviewed by a committee made up of five professors from the universities to which you are applying.

Postdoc salaries are set by the government, and investigators cannot pay salaries out of the project budget, meaning that regardless of the wealth of the lab, all postdocs are paid equally. Despite this rule, economic disparity around the country has resulted in wealthier areas maintaining higher levels of productivity and more competitive researchers—though the country is working to homogenize. Additionally, while salaries may be lower when compared directly to the US, it is important to remember that the cost of living in Brazil is also lower.

Denmark

Moving to colder climates, Preus highlighted that in Denmark the country's productivity, which, as measured by publications per researcher, is higher than in the US.

Part of this productivity comes from the large amount of interaction and collaboration between Denmark, Sweden, and other Scandinavian labs. Many projects and papers have seven or more co-authors, leading to high numbers of papers per scientist. The collaboration is made possible by the comparatively relaxed and collegial environment among scientists—lab results are often posted on an internal wiki and can be shared with colleagues working on other projects.

When looking to hire, professors must post available jobs publicly, and accept and consider all applications before hiring the candidate. Networking is helpful. Even though you have to apply to listed positions, unsolicited applications are more likely to be turned down. If you're set on one lab, it may help to apply to positions just outside of your specialty—the lab will keep good CVs on file to pull if something in your area becomes available. As a Danish postdoc you can also apply for grants from the European Union, which values high levels of collaboration. Additionally, there are several scientific companies in Denmark currently hiring for research positions, providing openings in the tight scientific job market.

Though taxes are comparatively high in most Scandinavian countries, PhD students and postdocs can still earn a comfortable living. Plus, with those high taxes come many government benefits, including comprehensive health care coverage.

India

While the work culture is transitioning, working in India is still going to be a big adjustment from working in the US. An added bonus for English speakers—even with 26 different languages and many more dialects recognized in India—English is the primary language of science in the country.

In your job search, networking is helpful, but you don't have to know someone to get a job. To find

a postdoc position or fellowship, look at postings on indiabiosciences.org. To apply for more traditional professorial positions, find an institute that fits your needs, give them a research proposal that includes your financial requirements and what you would teach, and then wait for next steps. Once you are hired, you will have time to set up a lab and build your curriculum to attract students both to your institute and lab.

There are few private universities, so most of the research is state-funded, and the positions are salaried in pay bands, based on experience. Regardless of location, institution, or what you are researching, you are in a pay band. Like Brazil, there is less collaboration in India than in the other countries represented in this article, though it is being encouraged.

Even though the research is primarily government-funded, there is lots of funding available, there are many new institutes opening, and the country regards research/academia highly.

Those interested in research career options in India should make note of available positions that are wholly- or co-sponsored by the Indian government. For example, the Ramalingaswami fellowship sponsors research for Indian scientists who seek to return to their home country with specific goals in mind. The Department of Biotechnology-Wellcome Trust fellowship is another such prestigious fellowship. These fellowships usually do not require a permanent position, but rather an institute and department willing to host the candidate for the fellowship period. Fellows have the option of applying for a permanent position with the host institute towards the end of the tenure, which is typically five years.

Need Advice?

Seeking career advice, trying to network, or have general questions about biophysics?

Find help on the **BPS Mentor Board**. Sign up and start connecting today!

Visit www.biophysics.org, and click "Professional Development" then "Careers."



Biophysical Journal Editor's Corner

Three Reasons to Publish in *Biophysical Journal*

1. Pay less.

As a Society member, page charges are as low as \$65 per page, including free e-color figures. A 10-page paper only costs \$650! For an additional \$1,000, a paper can be made open access and fully accessible to all readers immediately upon publication.

2. Get noticed.

Biophysical Journal (BJ) is read by researchers in a variety of disciplines—physics, chemistry, biology, engineering, and more! With features like Highlighted Papers, New & Notables and Emerging Biophysical Techniques, your selected paper has many opportunities for increased exposure.

3. Get your research published quickly.

BJ has an average turnaround of 30 days from time of submission to first decision. Upon acceptance, your paper will be published within 30 days.

Submit your manuscript today at www.biophysj.org.

Know the Editors

Each month we feature a *Biophysical Journal (BJ)* editor and highlight a *BJ* section.



Lukas Tamm

University of Virginia,
Associate Editor of the
Membranes Section

Q: What is your area of research?

In my laboratory, we study the structure and function of membrane proteins and their interaction with lipids by NMR, single molecule fluorescence, and other spectroscopic methods. My lab solved the first NMR

structure of a larger polytopic membrane protein in 2001 and has since determined three more NMR structures of relatively large membrane proteins. We have focused on structure determinations, folding, and lipid interactions of outer membrane proteins of Gram-negative bacteria. We also have a long-term interest in resolving the mechanisms of membrane fusion in virus entry and synaptic neurotransmitter release. We are focusing on structure-function relationships of the membrane-bound fusion domains of influenza, human immunodeficiency, and Ebola viruses. More recently we also became interested in resolving how the folding and assembly of neuronal SNARE proteins is coupled to synaptic vesicle fusion, which occurs on the millisecond timescale. NMR, single molecule fluorescence, and supported bilayer technologies are merged in these projects to find answers to pertinent questions of how membrane fusion is controlled in these systems.

Q: As Associate Editor of the Membranes section, what type of papers is *BJ* looking for in that area?

BJ is looking for any interesting papers in the field of membrane biophysics that make a significant impact in their area. Whether focusing entirely on lipids, proteins, both, or on larger systems, *BJ* editors are interested in evaluating the best papers as long as they address an important biophysical question of membrane biology, or develop an important method that could be used to address such questions. All biophysical approaches—experimental, computational, theoretical, or hybrid—that are applied to an important problem are welcome in the journal.

Q: What is the most rewarding part of being an Associate Editor?

There are many rewarding moments of being an associate editor, but perhaps the most rewarding is to facilitate the dissemination of the best biophysics to the scientific community. Biophysics has continuously renewed itself and is at the forefront of mechanistic molecular biological scientific discovery. *BJ* has played a major role in this process for many decades and it is my privilege to be part of it.

Public Affairs

Lorsch to Lead NIGMS

National Institutes of Health (NIH) Director *Francis Collins* announced on March 25 that *Jon Lorsch* will be the next director of the National Institute of General Medical Sciences (NIGMS). Lorsch is currently a professor in the Department of Biophysics and Biophysical Chemistry at Johns Hopkins University. He received a PhD in biochemistry from Harvard University and was a postdoctoral fellow at Stanford University. His research, which NIGMS has funded since 2000, focuses on translation initiation in eukaryotes.

In response to an NIH blog post announcing Lorsch's appointment, past NIGMS Director *Jeremy Berg* wrote "Jon is a great catch for NIGMS...at Johns Hopkins, he demonstrated his skills as a scientist, as a mentor, and as a teacher. In addition, his tremendous leadership potential revealed itself soon after his arrival. He was a driving force in curriculum reform efforts, both in the graduate school and in the medical school. In these contexts, he demonstrated great commitment to first principles and fundamentals while, at the same time, integrating a wide

range of perspectives into plans to move forward. He can manage well with day-to-day matters, but seems to thrive tackling tough and important problems that need addressing. I am sure that the NIGMS community will enjoy working with Jon through these challenging times."

Lorsch comes to NIGMS at a time when the Institute is tackling training and workforce issues based on recommendations of a report on the subject matter conducted in 2011 so his experience in education and curriculum matters is significant.

To read the NIH press release on Lorsch's appointment, go to <http://www.nih.gov/news/health/mar2013/od-25.htm>.

2013 Federal Budget

In March, Congress passed and the President signed a bill funding the US government through September 30, 2013. The budget was subject to the across-the-board funding cuts of roughly five percent due to the sequestration law passed over a year earlier. The final funding for research and development at science agencies significant to Society members is in the chart below.

FY 2013 Federal Funding for Research and Development by Agency

Agency	FY 2012 (in millions)	FY 2013 with sequester cuts (in millions)	Amount Change from FY 2012 (in millions)	Percent Change from FY 2012
NIH	\$30,046	\$28,604	-1,442	-4.8%
NSF	\$5,614	\$5,478	-136	+2.4%
DOE Office of Science	\$4,463	\$4,239	-224	-5.0%
NASA	\$9,399	\$9,027	-372	-4.0%
NIST	\$555	\$588	+33	+5.9%
Dept. of VA Affairs	\$1,164	\$1,116	+2	+0.1%

BPS Members Advocate for Research on Capitol Hill



Weiss, Rao, and Campbell meet with Congressman John Dingell.

On March 12 and 13, Biophysical Society members *Jenna Campbell*, University of Michigan, and *Rajini Rao*, Johns Hopkins University School of Medicine, joined more than 200 scientists, engineers, and business leaders making visits on Capitol Hill as part of the 17th Science-Engineering-Technology Congressional Visits Day (CVD). This annual event is sponsored by the Science-Engineering-Technology Work Group (SET), of which the Biophysical Society is a participant. The purpose of the visits was to educate Congress about the important role federal research funding plays in innovation and competitiveness; encourage them to avoid sequestration and cuts to research programs; and express support for sustained and predictable federal funding for research. The participants also had the opportunity to learn about the federal budget for science agencies, the appropriations process, and how sequestration will work from a panel of speakers that included representatives from the White House, Capitol Hill, and the American Association for the Advancement of Science.

Campbell and Rao, along with BPS staff member *Ellen Weiss*, met with staff in the offices of Senator *Debbie Stabenow* (D-MI), Senator *Carl Levin* (D-MI), Senator *Barbara Mikulski* (D-MD), Senator *Ben Cardin* (D-MD) Congressman *John Dingell* (D-MI), Congressman *Lynn Westmoreland* (R-GA), and Congressman *John Sarbanes* (D-MD).

During the event, the SET working group honored Congressmen *Mike Honda* (D-CA) and *Richard Hanna* (R-NY) with the George E. Brown, Jr. Leadership Award for leadership in science, technology, and mathematics on Capitol Hill. Both are active supporters of STEM education.

Brinkman Announces Departure from DOE

William Brinkman, head of the Department of Energy (DOE) Office of Science, resigned his post on April 12. While he left for personal reasons, in both a memo to Department employees and a hearing on Capitol Hill, Brinkman expressed concern about the toll federal budget cuts are having on US research and development as other countries are increasing their investments in this area.

Brinkman had led the Office of Science since 2009. Earlier in his career, he was a senior research physicist at Princeton University and vice president of research at Bell Laboratories. President Obama has not yet announced his replacement, who must be confirmed by the US Senate.

Biophysics Madness

Congratulations to "*FRET for structure-function in biophysics*," the 2013 champion of the Biophysical Society's Biophysics Madness bracket challenge! Sixteen biophysics topics and techniques squared off until one winner was chosen.

Thank you to everyone who voted—look out for next year's contest—what will be the 2014 champion?

To see the completed bracket, go to www.biophysics.org, and click on the Biophysics Madness logo.



Subgroups

IDP

2013 Annual Meeting

What an exciting symposium—the motto was *Functional Roles of Protein Disorder*, and that there is plenty of function in disorder became clear with the fascinating talks that entertained a standing-room-only crowd. The program ranged from proteins that use their disorder to function as chaperones and histone tails that mediate DNA compaction to systems biology of IDP synthesis and degradation.

The program got off to a great start with keynote lecturer *Peter Wright*, Scripps Research Institute, who expertly reviewed the advances that have been made towards understanding the biophysics, structural biology, and biological function of intrinsically disordered proteins, focusing on the principal concepts that have emerged so far about the diverse functional mechanisms of IDPs. He gave beautiful examples to show how biology utilizes IDPs to perform critical cellular functions for which globular proteins would be poorly suited. *Jim Bardwell*, Howard Hughes Medical Institute, University of Michigan, followed in Wright's footsteps, focusing on the intriguing discovery that intrinsic disorder in some molecular chaperones is essential for their functional activity. Stress-induced unfolding triggers their activation, illustrating the importance of intrinsic disorder for client recognition and binding. Next, *Jennifer Lee*, National Institutes of Health (NIH), discussed her exciting work on the intimate relationship between the amyloid-forming intrinsically disordered protein α -synuclein and membranes, with an emphasis on the effects of membrane remodeling on amyloid formation. *Ad Bax*, NIH, continued with the α -synuclein theme, talking about the use of NMR to study structure and dynamics of α -synuclein. His talk beautifully illustrated the functional role of α -synuclein's intrinsic disorder in mediating removal of highly toxic lipid peroxides from

membranes. *Elisar Barbar*, Oregon State University, closed the first session with a fascinating talk highlighting the functional importance of intrinsically disordered regions in fine-tuning the assembly of higher order macromolecular complexes.

After a break, *Ben Schuler*, University of Zürich, Switzerland, demonstrated how single-molecule FRET can be used to probe distance distributions and reconfiguration dynamics of unfolded proteins and IDPs. It turns out that many of the properties of IDPs can be described surprisingly well with mean-field polymer theory, including the role of charge interactions, denaturants, and the effect of internal friction on chain dynamics. His presentation was followed by *Liesbeth Veenhoff*, University of Groningen, The Netherlands, talking on the Nuclear Pore Complex (NPC), which is long known as a molecular machine that heavily relies on the function of IDPs which form the permeability barrier of the NPC. She highlighted a new role for ID domains in the nuclear transport of integral membrane proteins. She showed how an ID linker domain of approximately 180 amino acids is part of the sorting signal that facilitates the transport of particular Baker's yeast membrane proteins through the NPC from the outer to the inner membrane. Next, *Garagin Papoian*, University of Maryland, discussed an energy landscape-based approach to understanding IDPs using histone tails as a prominent example. He showed that various tails are characterized by complex landscapes and, furthermore, how these landscapes can be specifically modulated via post-translational modifications, such as lysine acetylations. Continuing on the theme of chromatin-related research, *Jeff Hayes*, University of Rochester, described elegant experiments in which FRET was used to document condensation of the linker histone H1 CTD upon binding to nucleosomes, DNA and oligonucleosome arrays. Results indicated that the H1 CTD exists as a random coil in the unbound state but adopts distinct structures depending on the binding target of the protein.

(Continued on page 10)

Members in the News



Peter Wolynes, Rice University and Society member since 1994, has been elected a member of the National Academy of Sciences Council.



Charles Lieber, Harvard University and Society member since 2011, is the most recent recipient of the American Chemical Society's Willard Gibbs Medal.



Cornelia Bargmann, Rockefeller University and Society member since 2000, has been awarded the Breakthrough Prize in Life Sciences from the Breakthrough Prize in Life Sciences Foundation.

(Continued from page 9)

Jörg Langowski, German Cancer Research Center, reported on very interesting atomistic simulations of nucleosomal particles with various histone tails being deleted. His group found that nucleosomal dynamics is sensitively modulated by the tails. Finally, the session was closed by the second keynote speaker, *Lila Gierasch*, University of Massachusetts, who gave a fascinating talk on merging the fields of IDPs and Systems Biology. Her lab developed sophisticated kinetic models of protein syntheses and degradation *in vivo*, which opens new horizons for predicting protein misfolding and aggregation and ways to potentially overcome various degenerative diseases.

In addition, the recipients of this year's Postdoctoral Research Awards presented short talks during the symposium. *Xu Wang*, University of Texas Medical School at Houston, studies the intrinsically disordered protein PEP-19 and introduced us to its important regulatory role in calcium and calmodulin signaling. *Abhinav Nath*, Yale University, presented exciting data on the screening and design of chemical modulators that affect the

membrane binding and toxicity of the intrinsically disordered peptide hormone IAPP, whose amyloid formation contributes to pancreatic β -cell death in type 2 diabetes.

—*Ursula Jakob* and *Garegin Papoian*,
IDP Subgroup co-chairs

BIV

The Biopolymers in Vivo (BIV) subgroup is busily planning its activities for the next Annual Meeting. Program co-chairs *Jeff Skolnick* and *Gilad Haran* are crafting a program for the BIV symposium that will include stimulating lectures on biophysics inside the cell. Our members-at-large, including newly elected member *Simon Ebbinghaus*, who joins *Daryl Eggers* and *Joan Shea*, are charged with raising awareness about the shared interests of those in BIV and attracting new members. At the BIV Business Meeting held at the Annual Meeting in Philadelphia, Eggers proposed a logo contest, and with uniform support for his proposal, the BIV Subgroup will launch a contest in 2013 to design a logo that captures the essence of the group. This logo will appear on the subgroup's homepage and may appear in future BPS newsletters with the subgroup's reports and announcements. Please alert your students now so that they can begin to brainstorm on their design. Details of the contest rules will be shared in the next newsletter.

We welcome our other new officers, *Jeetain Mittal*, treasurer/secretary, and *Silvia Cavagnero*, chair-elect. We are all eager to hear your thoughts on BIV activities, speaker suggestions, and more! Please encourage your students to participate in the Student Research Achievement Award (SRAA) poster competition and your postdoctoral fellows to submit abstracts for next year's Annual Meeting on topics that might be featured at the BIV symposium. We will be selecting young investigator speakers to present at the BIV symposium based on the submitted abstracts.

—*Lila Gierasch*, BIV Subgroup chair

Grants and Opportunities

Development of Highly Innovative Tools and Technology for Analysis of Single Cells (SBIR)

Objective: To develop next-generation tools that distinguish heterogeneous states among cells and have commercial potential.

Who may apply: Only United States small business concerns (SBCs) are eligible to submit applications for this opportunity.

Submission Deadline: August 5, 2013

Website: <http://grants.nih.gov/grants/guide/pa-files/PA-13-140.html>

Sômiya Award

Objective: To recognize research on real materials conducted by an international research team.

Who may apply: Teams must be nominated by an adhering Material Research Society member and must have collaborated across at least two continents sometime during the last decade.

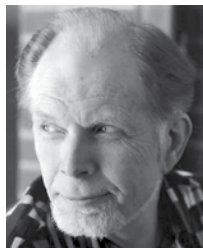
Website: http://www.iumrshq.org/index.php?option=com_content&view=article&id=131&Itemid=279

Suggest a Student or Postdoc to Spotlight

Do you have a spotlight-worthy student or postdoc in your lab? Let us know. Send his/her name to society@biophysics.org so that they can be featured in the newsletter.

Obituary

Rufus W. Lumry II



Rufus Worth Lumry II, 92, died March 23, 2013, in St. Paul, Minnesota. He was a Biophysical Society member since 1979, and elected a Society Fellow in 2003.

Lumry was born November 3, 1920, in Bismarck, North Dakota. He received his BS in chemistry from Harvard College in 1942. During World War II he was associated with the National Defense Research Committee. Following the war, he returned to Harvard and received his PhD in chemical physics in 1948. While working on his PhD, Lumry developed an interest in enzymes. In 1948 he moved to the University of Utah, joining *Henry Eyring* and *Emil Smith* among others. He moved to the University of Minnesota as an assistant professor of chemistry in 1954, and became a full professor in 1956. Lumry taught at the University of Minnesota until his retirement in 1990 and was the author of over 130 publications in the field of protein biophysical chemistry.

In the 1960s and 1970s, he spent time leading laboratories in the field of protein chemistry in Denmark, Italy, Germany, and Japan. Lumry was also involved in organizing major scientific conferences, including a Gordon Conference. He was an influential participant and organizer of the Red Cell and Hemoglobin Program Project Grant awarded to the University of Minnesota in the 1970s and 1980s. He was recipient of numerous grants from the National Science Foundation, the National Institutes of Health, and the US Navy.

A remarkable aspect of his career is that it extended well beyond his retirement. His 1995 chapter about new paradigms of protein research and his 2003 paper on protein substructures were significant contributions to the field of protein dynamics.

Rufus is survived by his three children, *Rufus W. Lumry III*, and *Stephen E. Lumry*, both of Bellevue, Washington, and *Ann E. Lumry* of St. Paul, Minnesota.

—*Bo Hedlund*, Minneapolis



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Mechanisms in Biology
Saint Petersburg, Russia
[www.febs-2013.org/eng/
default.aspx](http://www.febs-2013.org/eng/default.aspx)

July 13–17, 2013

9th European Biophysics
Congress
Lisbon, Portugal
www.ebsa2013.org

August

August 4–7, 2013

Student-Centered Education
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August 4–8, 2013

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[www.biochemistry.org/
conferences.aspx](http://www.biochemistry.org/conferences.aspx)

September

September 16–26, 2013

Protein Interactions, Assemblies
and Human Disease
Spetses, Greece
www.spetsai.org

September 18–21, 2013

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www.dgmp-kongress.de

October

October 7–9, 2013

2nd International Summit
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Las Vegas, Nevada
[www.omicsgroup.com/
conferences/toxicology-2013/](http://www.omicsgroup.com/conferences/toxicology-2013/)

October 28–30, 2013

The 51st Annual Meeting of
the Biophysical Society of Japan
Kyoto, Japan
[cls.kuicr.kyoto-u.ac.jp/
bsj2013/welcome_e.html](http://cls.kuicr.kyoto-u.ac.jp/bsj2013/welcome_e.html)