**Biophysical** Society

July

2012

#### **DEADLINES**

### Weak Protein-Ligand Interactions

**October 14–18, 2012** Beijing, China

July 12
Early Registration

### Lipid-Protein Interactions in Membranes

November 1–5 , 2012 Hyderabad, India

July 8
Abstract Submission

August 15
Early Registration

# 57th Annual Meeting

February 2–6, 2013 Philadelphia, Pennsylvania

October 1, 2012
Abstract Submission

## **Society Elections**

August 1
Voting Ends

# Call for 2014 Thematic Meetings

### **Proposal Deadline: July 6, 2012**

Each year the Biophysical Society sponsors focused-topic meetings for 150-300 attendees organized by Society members. The Society provides partial financial support in the range of \$10,000 for these meetings, in addition to meeting management. Since their inception in 2010, these meetings have been held throughout the world. What makes these thematic meetings unique is that they bring together researchers in different areas who do not otherwise attend the same conferences, but work on the same topics from different perspectives. Bringing these individuals and approaches together is the essence of biophysics.

The Society is now calling for proposals for 2014 thematic meetings. Complete submis-

sions will be considered by the Thematic Meetings Committee and, pending review, organizers will be contacted for more detailed information. The Committee's final recommendations will be submitted to the Society's Executive Board for approval in late October.

For criteria, submission requirements, and a complete listing of past and future meetings, visit www.biophysics.org/tabid/2256/Default.aspx

Proposals must be submitted through the onsite submission site at www.surveymonkey. com/s/2014thematic for consideration.

The deadline for submission of proposals for 2014 thematic meetings is July 6, 2012.

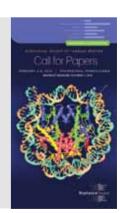
# Karolin Luger, 2013 National Lecturer



Karolin Luger, Colorado State University, will present the National Lecture at the Biophysical Society 57<sup>th</sup> Annual Meeting, which will take place in Philadelphia, Pennsylvania, February 2–6, 2013. The Lecture, *The* Making and Breaking of Nucleosomes, will be on Monday, February 4.

### **Call For Papers**

Look for the Society's 2013 Annual Meeting Call for Papers this month in your mailbox.



# **CONTENTS**

Biophysicist in Profile —	2
Careers —	4
Subgroups —	6
Grants and Opps —	7
Members in News —	7

Public Affairs — 8
International Affairs — 9
2012 Summer Course — 10
Student Spotlight — 11
Upcoming Events — 12



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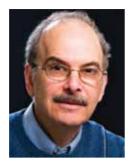
#### Newsletter

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# Biophysicist in Profile

**Leslie Loew** 

For *Leslie Loew*, Boehringer Ingelheim Chair in Cell Sciences, Professor of Cell Biology, Professor of Computer Science and Engineering, Director of the R D Berlin Center for Cell Analysis and Modeling at the University of Connecticut Health Center (UCHC), and newly instated Editor-in-Chief of *Biophysical Journal*, it all started with a chemistry set. "In those days, chem

sets included alcohol lamps for heating chemical reactions, and I still remember smelling up the house by heating the yellow sulfur that came with the set," Loew says. "Not very safe, but great fun for a tenyear-old." His parents, refugees from Nazi Germany who both worked in the clothing business, supported Loew's enthusiasm for chemistry. "They strongly valued education and were delighted to see me pursue a scientific career," Loew says. He majored in chemistry as an undergraduate at the City College of New York. He then went on to Cornell University to earn his PhD in physical organic chemistry, working under *Charles Wilcox* and Nobel Laureate *Roald Hoffmann*.

Six months shy of completing his PhD, *Britton Chance's* work studying brain physiology with the use of fluorescent probes caught Loew's attention and kindled in him the first inkling of interest in biophysics as a career field. Despite being accepted as a postdoctoral fellow with Chance, Loew wasn't yet ready to make such a departure from physical organic chemistry. Instead he took a postdoc position

Biophysics is by definition multidisciplinary; therefore it is precisely the field that can bridge molecular, cell, organ, and systems biology. I would love to be able to help build those bridges.

#### —Leslie Loew

in *Frank Westheimer's* lab at Harvard University. He stayed in touch with Chance, though, and upon starting his own chemistry lab at SUNY Binghamton, Loew branched out to work on the design and synthesis of fluorescent probes for monitoring membrane potential. What he found intrigued him. "Up to that point, biophysicists like Chance and neuroscientists like *Larry Cohen* were screening dyes from chemical catalogs to find ones that would produce a sensitive response," Loew says. "I used quantum mechanical calculations to predict which kinds of dye chromophores would have large Stark effects and thus be sensitive to the electric field in the cell membrane." Using this theory as a basis,

Loew's lab began synthesizing dyes that could be inserted into membranes to change their spectra in response to action potentials. But he didn't stop there. "I soon decided that it would be really interesting to use the dyes myself to study neuronal cell physiology," he says. Requiring a biomedical research environment for this undertaking, Loew moved to UCHC.

Today, Loew is still at work designing and synthesizing voltage-sensitive dyes, but he is by no means tied to one research topic. "My research interests are pretty diverse, although there are connections between all of them that may only be apparent to me," he says. "I just find myself easily interested by lots of different things." He also works on electrical and biochemical signaling in dendritic spines and projects involving the dynamics of the actin cytoskeleton. He's even planning a foray into cardiac physiology. Such varied research interests doesn't denote a lack of focus, however. "I very much appreciate how solid the science Les does is," says *David Piston*, Louise B. McGavock Chair and Professor of Molecular Physiology and Biophysics at the Vanderbilt Kennedy Center. "I have relied on many of his publications over the years, and the experiments are always wonderfully well-done."

Perhaps the most notable of Loew's projects is the Virtual Cell (VCell) project, a computational tool for modeling and simulating cell physiology (http:// vcell.org). His interest piqued by how his own fluorescence data translated to what was happening inside cells, Loew led a team of physicists and engineers in the UCHC Center for Cell Analysis and Modeling to create the program. "One can think of Virtual Cell as a theater in which a cell biologist can stage a play that realistically portrays the molecular events driving some aspect of cell physiology," says John Tyson, University Distinguished Professor in the Department of Biology at Virginia Polytechnic Institute. Ann Cowan, Professor of Molecular, Microbial, and Structural Biology at UCHC, helped Loew build VCell after initially helping him to create the Center itself, of which she is Deputy Director. "Les is accepting of different ideas and directions and is always willing to try new concepts," Cowan says. "He is very loyal and works very hard to help other faculty, students, and staff, and goes the extra mile to make sure they are moving ahead." Loew's devotion to the VCell project paid off, as the software currently garners more than 3,000 users worldwide. "With new computational tools like VCell, we can now hope to organize and integrate the data on the individual biochemical and biophysical mechanisms that control molecular events inside cells," Loew says.

On July 1, Loew succeeded Edward Egelman as Editor-in-Chief of Biophysical Journal, serving a five-year term in the role and beginning the newest facet of his career. A veteran member of Biophysical Society, Loew has missed only one Annual Meeting since joining in 1979. "The meeting has never failed to provide a stimulus to new ideas and new scientific interactions," he says. The Biophysical *Journal* serves much the same purpose for Loew. "I read more papers per issue than in any other journal because there is just so much cool science published there," he says. "Ed Egelman has done a tremendous job of defining a high standard for the papers published in *Biophysical Journal*. Taking on the editorship is truly an honor, but being charged with maintaining this high standard is also daunting." As the Journal's fourteenth Editor-in-Chief, he plans to do just that by implementing some minor adjustments right away, including aligning the Editorial Board sections with the Table of Contents so that the papers published are representative of biophysics as a field, and increasing the regularity of Biophysical Reviews published by instating a new Associate Editor responsible for handling Biophysical Reviews. "As to some of my longerterm ideas, I will be very focused on trying to improve the range of scientific content, taking full advantage of the possibilities provided by electronic publishing," Loew says. "It should be possible to allow readers to interact with data such as molecular structures, 3-D images, 4-D movies, or mathematical model simulations." Loew is confident that the Cell Press partnership with the *Journal* will serve as a reliable resource for technological difficulties and formatting online content. "We may also need to establish standard formats for publishing this kind of material, just as we have standards for reference styles and page layouts," he adds, "but I believe the benefit of this enriched level of scientific communication, particularly for the field of biophysics, will motivate authors to adopt these standards."

Throughout his diverse career, Loew's family has kept him grounded—an endeavor that Loew attributes to his wife, Helen. "She has been amazingly understanding of the demands of a scientific career," Loew says, "but also kept me focused on our family as truly the most important priority." Loew immensely enjoys spending time with his 11 grandchildren. "We are constantly discussing science and doing math puzzles," he says. "The latest deep discussions with my eight- and ten-year-old grandsons were about Fibonacci numbers."

For Loew, the future of biophysics is bright, albeit fraught with puzzles more complex than those he helps his young grandchildren solve. But it's a challenge he believes the multidisciplinary field is ready to accept. "Our biophysics community is accumulating data on the structure and dynamics of macromolecules; the detailed mechanisms of membrane channels and transporters; high resolution molecular distributions in cells; dynamics of organelles, cells, and tissues; and the kinetics of cell signaling networks," he says. "These are the pieces of the puzzle of how cells and organisms function. The next challenge is to marshal the physics and physical chemistry that will allow us to put these pieces of the puzzle together."



Leslie Loew with his wife, Helen.



Leslie Loew reading with his grandchildren.

4

# Careers

## Getting Started In Start-Ups

**BIOPHYSICAL SOCIETY NEWSLETTER** 

The Committee for Professional Opportunities for Women (CPOW) hosted a panel at the 56<sup>th</sup> Annual Meeting in San Diego in February called Getting Started in Start-Ups. Panelists with a broad range of experiences in start-up companies shared their insights in starting start-ups: Gina Devasahayam, GenetikSignal, is transitioning from academia to starting a company based on her research discoveries; Chris Mathes, Sophion Bio-

science, Inc., has worked in both scientific and business development ends of start-up companies; and *Steve Smith*, Fluxion Biosciences, has worked at four different start-up companies and initiated two start-up ventures of his own. The panelists also took questions from the audience. Below are some highlights from this session.

**Academia or Industry?** 

If you're not sure whether an academic or an industry career is right for you, do some soulsearching to discover what you want to do. It's a misconception within academia that industry is limiting; there is actually freedom in industry. At present only 10 percent of PhDs become professors, making industry a good career option. Keep your CV and resume current, showing how your academic studies are related, applied, or translational, beyond basic science. Develop your presentation so that it tells a story. After your PhD, consider consulting for a company developing a product you use. Find these companies at the next meeting you attend and talk to them. Get to know the company and the employees. By working with them you'll get your foot in the door, and the start-up will get your expertise at a manageable cost. If you can't get a paying job, volunteer instead. Be persistent and show initiative in other ways.

Another way of getting experience is to do a postdoctoral fellowship at a company. In recent years the number of industry related postdoctoral fellowships are fewer due to restructuring of many companies. The industry postdoctoral fellowship (two-three years) is typically shorter than an academic postdoctoral fellowship. Whatever you do, don't act like a failed academic who had to resort to a career in industry as Plan B. This attitude will not ingratiate you to prospective industry employers.

Just because you choose a career in industry doesn't mean you'll have to disassociate yourself from academia. Collaboration between academia and industry can be essential not only to advancing your research but to garnering support for

Just because you choose a career in industry doesn't mean you'll have to disassociate yourself from academia.

your start-up. Partner with universities and get on the same team—they will advocate for you if something is in it for them. Publishing is still an important part of an industry career, and often is a result of

collaborations between colleagues in industry and academia. If you are getting a postdoctoral fellowship at a company you can negotiate when and what you would be able to publish before you accept the position. On your own, you'll publish mainly in industry journals rather than academic ones, so be careful not to publish early things you might want to patent later.

Once you choose an industry career, it can be hard to jump back to an academic career. It comes down to leaving your comfort zone and timing it right. Give yourself a two-year window in which to allow yourself to go back to academia. Beyond two years this transition becomes significantly more difficult.

#### **Getting Started**

A great way to learn the ropes of a start-up company is to work for one. You'll get experience and the chance to develop a strong interest in a technology that you like. Choose a company that shares your outlook and get that basic experience in how to make a business function. There may be more

5

industry jobs in your area than you might think. Look around to find out what's available where you live. Or, think about where you want to live, what works for you, and go there. If you want a job in pharmaceuticals, for example, it helps to be near a hub. Other companies want to make incubators too, so do some research and see what you can find. Some cities are more attractive as they are more active in helping start-ups and have more incubators available for start-ups. If you are working at a university and beginning a start-up company you have to be careful to demarcate the percent of time that you will devote to your company and to the university.

This will avoid any future potential conflicts of interest. Having entrepreneurial mentors is a great resource to share ideas and get suggestions.

If you're interested in offering a service instead of a product, make sure there's a market for the service you're offering. Though this option boasts low overhead costs and a generous income, it's competitive. Use Google to scope out your competition, and then get out there and lock people into your service. Keep your cost sustainable, though; don't undervalue your service. In the best-case scenario, people are coming to you for the service already.

### **Funding and Fundraising**

As with any career, starting your own business comes with challenges—funding and fundraising most prevalent among them. This sets the risk level higher than that of an academic career. Finding start-up funds is especially difficult, as venture capitalists aren't willing to invest at the high-risk discovery stage. If you can avoid phase I clinical trials and use a molecule that is already FDA approved, you've got a head-start. Above all, you must make sure you're stable enough to withstand the ups and downs of the risk. Having a secondary source of income is contingent upon the level of risk you can handle. Even if you never turn a profit but have a constant flow of funding, this is a good business plan.

In the beginning, get grant funding from the federal and state governments, who will support innovation to create jobs. Use resources like those found at Startup America Partnership (www.s.co). Some of these opportunities aren't exactly funding, but can help you make connections with potential funding sources. Attending specialized conferences dedicated to funding and commercialization of new companies is worthwhile. Entrepreneurship programs like the INNoVATE™ program at Johns Hopkins University Carey Business School (http://carey. jhu.edu/our\_programs/Innovate) can help you

> hone the tools you need to get started. You can also buy in this expertise by selling shares: hire a CEO whose job it is to get venture capitalist funding for your company. However, this assistance will come at the expense of how much of your

company the CEO will own. When it comes to legal aspects of starting your company, don't think twice about outsourcing those to lawyers. The investment is well worth it. Some pro bono legal services are available to start-ups in certain cities. Another aspect that should not be neglected is financial accounting for the start-up which can also be outsourced.

Although many start-ups never get a final product finished, if you have a product then hiring a business manager to help market and sell the product effectively is usually beneficial.

#### **The Bottom Line**

Having entrepreneurial

mentors is a great resource

to share ideas and get

suggestions.

Your personality is your greatest asset in starting a company, more crucial even than a flair for business. You need to be personable and able to work with all kinds of people. Always be friendly with people you meet along the way. Search LinkedIn for contacts, network, and take steps toward starting your business no matter where you are in the process. Above all, enjoy your work.

-Merritt Maduke and Aldrin Gomes **CPOW** members

# **Subgroups**

### IDP

### **Networking event: Symposium on Biomolecular Structure, Dynamics** and Function

Several of the more than 30 presentations and approximately 70 posters presented at this symposium, held at St. Jude Children's Research Hospital on April 27-29, addressed the role of protein disorder in biological processes. Brian Volkman, Medical College of Wisconsin, described how the chemokine Lymphotactin performs different functions by accessing alternative native states that interconvert through excursions to the unfolded state. Shou-Ou Shan, CalTech, reported on studies of interactions between the signal recognition particle (SRP) and the SRP receptor (crucial to the control of protein targeting). She observed large conformational rearrangements that, by means of a disordered segment, allow part of the SRP receptor to alternatively interact with two distal sites on the SRP RNA. *Ashok Deniz*, Scripps, used single-molecule fluorescence techniques to characterize folding pathways for alpha-synuclein that may be relevant to Parkinson's disease. Diana Mitrea, St. Jude, demonstrated that the nucleolar protein Npm's functional equilibrium between unfolded/monomeric and folded/pentameric states is controlled by posttranslational modifications. Scott Showalter, Penn State, applied novel direct 13C detection NMR methods to the conformational and dynamic studies of FCP1 intrinsically disordered C terminus and its interaction with RAP74, a critical event in RNA transcription. Tanja Mittag, St. Jude, correlated her past studies of the dynamic interaction between the yeast ubiquitin ligase Cdc4 and its phosphorylated target Sic1 with new data suggesting that similar interactions may take place in human ubiquitination pathways. Other presentations, including those by the keynote speaker, Brenda Schulman, St. Jude, and Joel Tolman, Johns Hopkins, highlighted the importance of highly dynamic events in E1/E2/E3 ubiquitination cascades. A theme underlying several of

these quite diverse reports is the observation that disorder may be required to mediate functional mechanisms of many proteins that would generally be classified as 'folded'. These new exciting results emphasize that 'disorder' can play roles even in the context of 'order', with fascinating and unpredictable mechanisms mediating excursions between these states.

The meeting was supported in part by a local networking mini-grant from the Biophysical Society.

—Ariele Viacava Follis **IDP** Postdoctoral Representative

### Membrane Biophysics

### **Call for Presentations:** 2013 Annual Symposium

The theme of the 2013 annual symposium will be Macromolecular Ion Channel / Transporter Assemblies. Subgroup members with exciting new data are encouraged to contact the subgroup chair, Diomedes Logothetis at delogothetis@vcu. edu, to express their interest in presenting at the symposium. Preference will be given to work that addresses structure and function relationships of macromolecular complexes. The program needs to be completed by the end of July in order to allow the Society enough time for appropriate exposure.

### **MSAS**

### **Bill Wimley named first Thomas E. Thompson Awardee**



It is a wonderful illustration of Tom Thompson's lasting legacy that the first recipient of the newly established Thomas E. Thompson Award for research excellence in membrane structure and assembly will be William C Wimley. He earned his PhD inTom's laboratory at the University

of Virginia by studying the biophysics of lipid-lipid interactions in multicomponent bilayers. Now a

Professor at Tulane University, Wimley studies the fundamental structure-function relationships of membrane active peptides. Wimley will present his award lecture at the 2013 MSAS subgroup symposium in Philadelphia and receive a \$1000 award sponsored by Avanti Polar Lipids, Inc. Congratulations, Bill. We are looking forward to your lecture!

-Heiko Heerklotz, Acting Chair MSAS

## **Grants and Opportunities**

**Name:** East Asia and Pacific Summer Institutes for US Graduate Students (EAPSI)

**Objective:** The primary goals of EAPSI are to provide science and engineering students exposure to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts.

Who May Apply: US graduate students in science and engineering

Application Deadline: November 14, 2012

Website: http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5284

Name: Cotrell Scholar Awards

**Objective:** To build a community of outstanding scholar-educators who are dedicated to becoming leaders in both research and teaching and who collectively have the potential to change the way science is taught nationally.

Who May Apply: Tenure-track faculty members at U.S. institutions whose primary appointment is in a department of astronomy, biochemistry, biophysics, chemistry, or physics, but not in a school of medicine or engineering. The department must grant both the BS/BA and Ph.D. For the 2012 proposal cycle, eligibility is limited to faculty members who started their first tenure-track position anytime in calendar year 2009.

Application Deadline: August 1, 2012

Website: http://www.rescorp.org/grants-and-awards/cottrell-scholar-awards

### Members in the News





Cornelia Bargmann of Rockefeller University and Society member since 2000 and Winfried Denk of the Max Planck Institute of Medical Research and Society member since 1986 are recipients of the 2012 Kavli Prize in Neuroscience, along with Ann M. Graybiel (not pictured) of MIT.



Bernhard Palsson of the University of California, San Diego, and Society member since 2003 received the Promega Biotechnology Research Award from the American Society for Microbiology.



Rienk van Grondelle of Vrije University, Amsterdam, and Society member since 1992 was named the 2012 Humboldt Research awardee.

# Public Affairs

## House Approves Budget Increase for the NSF

In early May, the US House of Representatives approved the FY 2013 Commerce, Justice, Science appropriations bill, HR 5326, which includes funding for the National Science Foundation (NSF). The bill provides the NSF with \$7.333 billion for FY 2013, a \$299 million (4.3 percent) increase over FY 2012.

The approved bill includes two controversial amendments. The first, introduced by Representative Jeff Flake (R-AZ), prohibits NSF from using funds to carry out the functions of the Political Science Program. The second, introduced by Representative Chip Cravaack (R-MN) bans the use of funds for activities of the NSF Climate Change Education Program.

In early June, the Biophysical Society joined with 120 other scientific organizations and sent a letter to the Senate discouraging Congress from micromanaging the merit review process at NSF and picking out certain programs to defund. The letter also asks the Senate to support the \$7.33 billion funding level passed by the House.

In a statement issued May 7, President Obama indicated that if presented with HR 5326 in its current form, he would veto the bill because it undermines the bipartisan agreement on discretionary spending caps established in the Budget Control Act of 2011.

To read the letter sent to the Senate, go to www. biophysics.org/AboutUs/NewsReleases/tabid/2243/ Default.aspx.

# NIH Tests Special Grant Review for Well-funded Pls

In response to feedback the National Institutes of Health (NIH) received from the scientific community in the fall of 2011 on how to operate effectively during fiscally austere times, the NIH

is piloting a new Special Council Review process for research applications from investigators with more than \$1.5 million total annual NIH support. The Advisory Councils of each NIH Institute and Center were instructed to pilot the new procedures for such review during their May council meetings.

While grants from these well-funded investigators are subjected to additional scrutiny, the NIH has not placed a cap on total NIH funding for any one investigator. In its notice announcing the new review, the NIH stated that it "recognizes that some of the most productive investigators are leading significant research teams and programs that may require over \$1.5 million/year of NIH awards to be sustained. NIH also recognizes that some types of research, for example large complex clinical trials, may commonly trigger this review but may also be recommended for funding."

The Special Council Review applies to new and re-newal applications for investigator-initiated research projects and does not include grant programs that support training and career development and center grants.

To conduct the review, Institute and Center Council members are provided with a list of all applications that meet the threshold for special review as well as the Institute or Center's recommendation on whether to fund each proposal. In assessing these applications, Council members are asked "to recommend consideration of funding for applications that afford a unique opportunity to advance research which is both highly promising and distinct from the other funded projects from the PD/PI." If the application is a renewal, the Council can take into consideration the value of continuing a productive project to the overall research program in that lab and his/her collaborators' labs.

Additional details and a list of frequently asked questions related to these procedures will be provided if NIH decides to fully implement the Special Council Review policy.

9

## Federal Spending on Employee Travel Threatened

In response to excessive federal spending at a General Services Administration (GSA) last year, the House and Senate have approved amendments to severely limit federal spending on conferences and curtail travel by government employees. The Senate amendment (introduced by Senators Tom Coburn (R-OK), John McCain (R-AZ), and Ron Johnson (R-WI) was added to the Postal Service Act (S 1789). The House amendment, which has identical language, was attached to the Digital Accountability and Transparency (DATA) Act (HR 2146). It is unlikely the DATA Act will pass through the Senate, but the Postal Service Act could be passed by the House this year.

If the language in the amendment were to become law, government scientists would be limited in their participation in public meetings, scientific conferences, and professional society activities. It would also limit support for scientific conferences. If the "expend funds" language is interpreted strictly, it could possibly apply to extramural grantees as well.

The Biophysical Society, along with 51 other scientific organizations, expressed its concern over this language in a letter prepared by the American Association for the Advancement of Science (AAAS) and sent to Congress in May 2012. The letter urged Congress to allow greater flexibility for government employees to attend scientific and technical conferences organized or supported by professional societies and non-governmental organizations. Government scientists share information about their agency programs at these meetings and have the opportunity to hear from grantees about their government-funded research. Federally employed scientists also attend meetings to learn about what is going on in their field of research and stay current on new developments.

In addition to the legislative initiative to limit travel, the Office of Management and Budget (OMB) issued a memorandum on May 11 promoting efficient spending and including provisions targeting federal travel and conference spending. The memorandum requires agencies to decrease travel expenditures by 30 percent.

Agencies have 90 days to report to OMB on how they will implement the guidance.

# International Affairs

# Global Science Council Forms, Releases Standards for Peer Review

In mid-May, nearly 50 leaders of national researchfunding agencies gathered at the Global Summit on Merit Review, ending a year-long initiative to develop the Statement of Principles for Scientific Merit Review. This statement focuses on six principles needed for an effective peer review system.

The summit, held at the US National Science Foundation (NSF) headquarters in Arlington, Virginia, also marked the inaugural meeting of the Global Research Council (GRC). As international scientific collaborations rapidly increase, the GRC hopes to address problems that hinder the globalization of science. The GRC will create a forum for discussion of general policy issues important to research-funding agencies around the world. NSF director Subra Suresh, who coordinated the summit, believes that the GRC will serve as "the first step toward a more unified approach to the scientific process."

The GRC plans to discuss research integrity and open access to scientific research over the next year and will release consensus statements on these topics during the next global summit in May 2013. Before this gathering, to be held in Berlin, Germany, regional GRC meetings will take place in each of the five world regions.

For more information, visit www.nsf.gov.

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Blog: biophysicalsociety. wordpress.com

10

# 2012 Summer Course Begins

The fifth year of the NIGMS-funded Biophysical Society Summer Course: Case Studies in the Physics of Life kicked off on May 15.

BIOPHYSICAL SOCIETY NEWSLETTER .

Twelve students from diverse academic, cultural, and geographic backgrounds are spending their summer at the University of North Carolina at Chapel Hill (UNC) studying biophysics. The 12week course gives students the chance to complete their own biophysics-related research project in the lab with their self-selected mentors. In addition to lab work, students attend lectures and seminars

given by UNC faculty and visiting speakers from biophysics programs around the country.

The full summer schedule, prepared by Course Co-Directors and Society members Mike Jarstfer and Barry Lentz, also includes professional development classes, a field trip to the beach, and a visit to a lab at Duke University. Pradeep Kota, Minu Ramanan (a former summer course student), and *Bo Zhao*, all graduate students at UNC, are acting as TAs for the Course, hosting recitation sessions and giving quizzes.



**Moses Demehin Towson University** Molecular Biology. **Bioinformatics and Biochemistry Major** 



Juan Diaz University of Puerto Rico, Rio Piedras, Puerto Rico **Physics Major** 



**Emma Hadley Scripps College Biochemistry Major** 



Meighan LeGrand **Towson University Biochemistry & Chemistry Double** Major



Carlo Mercado **Towson University Forensic Chemistry Major** Molecular Biology Minor



**Brooke Miller** St. Louis University **Chemistry Major History & Philosophy Minor** 



Abdulafeez Oluvadi **Towson University Biochemistry & Chemistry Double** Major



Gelson Pagan Diaz University of Puerto Rico, Mayaguez, Puerto Rico **Mechanical Engineering & Theoretical Physics Major** 



**Cameron Pinnock Wayne State University Biomedical Physics Major** 



Nawaphon Sittisawassakul **SUNY Purchase College Biology Major** 



**Hillary Sowa** Wellesley College **Biology Major Psychology Minor** 

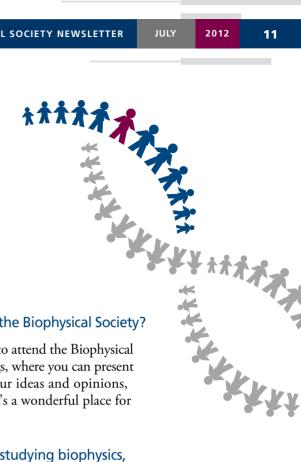


**Uduak Udoeyo Temple University Biology Major** 



# Student Spotlight

## Yulia Shulga McMaster University **Epand Lab**



### Q: What initially attracted you to biophysics?

As far as I remember, I have been always interested in nature and natural sciences. Biophysics attracts me by its multidisciplinarity, the ability of studying the problem from different angles.

### Q: What specific areas are you studying?

My research field includes membrane biochemistry with a focus on lipid metabolism and lipid kinases, particularly a diverse family of diacylglycerol kinases and phosphatidylinositol-4-phosphate 5-kinases.

### Q: What is your current research project?

My current research project is studying the role of diacylglycerol kinases in adipocyte differentiation and possible involvement of these enzymes in type 2 diabetes.

## Q: What do you hope to do after graduation?

I'm planning to continue my research as a postdoctoral fellow.

### Q: What do you see as the biggest challenge as a student of biophysics?

The beauty of biophysics is in its complexity, but at the same time it presents the biggest challenge. A student of biophysics needs to have comprehensive background knowledge in many areas, which requires extensive studying, as well as being open-minded to the new information and approaches.

### Q: Why did you join the Biophysical Society?

It's a great opportunity to attend the Biophysical Society Annual Meetings, where you can present your research, share your ideas and opinions, meet other scientists. It's a wonderful place for networking.

### Q: When you're not studying biophysics, what do you like to do in your spare time?

I enjoy reading, cycling, scuba diving and, when there is an opportunity, traveling to different countries to learn about other cultures and their history

### Richard Epand, Shulga's PI says:

"It has been a pleasure working with Yulia as a graduate student in our lab. Not only has she shown technical skills and efficiency but also she has been able to increasingly contribute to the development of ideas and projects. She has always been self-critical and accurate in her interpretation of experimental results. During her stay in our laboratory she has been involved in several diverse projects that have given her a broad understanding of the role of biological membranes in signal transduction processes, which has resulted in 12 publications in major, peer-reviewed scientific journals."

### **Suggest a Student or Postdoc to Spotlight**

Do you have a spotlight-worthy student or postdoc in your lab? Send his/her name to society@biophysics.org.



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## **UPCOMING EVENTS**

BIOPHYSICAL SOCIETY NEWSLETTER JULY 2012

### September

### September 27-28, 2012

Fourth European Workshop on Lipid Mediators Paris, France http://workshop-lipid.eu/

### September 30-October 9, 2012

11<sup>th</sup> Greta Pifat-Mrzljak International School of Biophysics *Primosten, Croatia* http://www.irb.hr/crosb2012

### **October**

### October 14-18, 2012

New Horizons in Biophysics and Cell Biology Beijing, China http://www.biophysics. org/2012china/Home/tabid/2984/ Default.aspx

Weak Protein-Ligand Interactions:

#### October 30-31, 2012

Indian Lab Automation

Mumbai, India

http://selectbiosciences.com/
conferences/index.aspx?conf
=ILA2012

### November

### November 1-5, 2012

Lipid-Protein Interactions in Membranes: Implications for Health and Disease Hyderabad, India http://www.biophysics. org/2012india/Home/tabid/3788/ Default.aspx

#### November 17-20, 2012

From Functional Genomics to Systems Biology *Heidelberg, Germany* http://www.embl.de/training/ events/2012/OMX12-01/index.html

### **December**

### December 10-13, 2012

14<sup>th</sup> RCMI International Symposium on Health Disparities San Juan, Puerto Rico http://www.rcmibiennial.org/

#### December 13-18, 2012

Immunological Mechanisms of Vaccination Ottowa, Canada http://www.keystonesymposia.org/Meetings/viewMeetings.cfm?MeetingID=1224&sub Tab=program