

Biophysical Society NEWSLETTER

February 2011

55th Annual Meeting

March 5–9, 2011
Baltimore, Maryland

Steven Chu US
Secretary of Energy

Biophysics in a New
Light

March 6, 1:00 PM

New & Notable Symposium Speakers Announced

Seven presentations for the 2011 New & Notable Symposium were selected from among more than 160 submissions. The speakers selected were:

Lawrence Lee, Victor Chang Cardiac Research Institute, Australia

Structure of the Torque Ring of the Bacterial Flagellar Motor and Molecular Basis for Rotational Switching

Karen Fleming (not pictured), Johns Hopkins University

A Novel Hydrophobicity Scale Derived from Membrane Protein Folding into Phospholipid Bilayers

Harel Weinstein, Weill Cornell Medical College
Putting the Moves on Neurotransmitter Transporters

William Moerner (not pictured), Stanford University

Three-dimensional Tracking of Single mRNA Particles in *S. Cerevisiae* Using a Double-Helix Point Spread Function



Lawrence Lee



Takahide Kon



Harel Weinstein

Andre Kleber (not pictured), Harvard Medical School
Connexins, Cell-to-Cell Coupling and Electrical Impulse Propagation

Caroline Ajo-Franklin (not pictured), Lawrence Berkeley National Laboratory
Engineering Cells to Grow Electrical Interfaces with Materials

Takahide Kon (not pictured), Osaka University, Japan
Crystal Structure of the Dynein Motor Domain at 5 Å Resolution

The New & Notable Symposium will be held on March 6 at 10:45 AM.

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Biophysicist in Profile

ANNE ULRICH

For a time, Anne Ulrich, Director of the Institute of Biological Interfaces and Chair of Biochemistry at the Karlsruhe Institute of Technology (KIT), preferred to direct her scientific gaze to the heavens rather than toward earth. “I actually wanted to become an astronaut and when I was five I practiced balancing on one leg to get fit for space travel,” she says. She reconsidered when she saw a unique sculpture at a science fair that the creator had formed by imploding a half-empty soda bottle in liquid nitrogen. Her interest in what she calls “earthly phenomena” increased in high school biology when a project on the preparation of a clean turtle skeleton turned into an archeological dig involving an anthill. Chemistry won her over completely. “I thought it cool to choose chemistry as an exotic hobby,” she says. She entered the International Chemistry Olympiad and holed up with Chemistry by *Charles E. Mortimer* at summer camp while the other kids played cards.

Ulrich’s early devotion to science is no surprise, considering her family’s occupations. Ulrich’s brother is the only member of her immediate family whose career path veered away from science—after his postdoc in physics, that is. Ulrich’s father taught physics himself at the Technical University of Hamburg while her mother was a pharmacist.

“As a researcher, it is an enormous privilege to create your own playground as your place of work.”

—ANNE ULRICH

Her sister, *Helle Ulrich*, heads one of Cancer Research UK’s research groups, on DNA repair, at the London Research Institute.



One of Ulrich’s hedgehogs, Hagrid.

Ulrich’s own career in solid state NMR of biomembranes began humbly. As a woman researching techniques on the outskirts of an undeveloped field, she faced her share of obstacles. Her mentor at the University of Oxford, *Anthony Watts*, recalls her perseverance. “Anne had many knocks to her confidence,” he says. “It was the very early days of solid state NMR, and she had some exceptionally challenging projects, all of which worked and became successful.” Having walked into Watts’ lab of her own volition, Watts involved her in a ten-month project that spurred a five-year relationship. The work Watts and Ulrich did together as she completed her PhD was noteworthy. “We were trying to use deuterium as a nucleus for resolving structural details of membrane proteins against all odds of sensitivity,” says Watts, “but through Anne’s persistence and determination, she managed to resolve the conformation of retinal in bacteriorhodopsin in purple membranes using wide line solid state NMR.”

Her early postdoc work in solid state NMR inspired the research Ulrich pursues today at the KIT. “[NMR] has clearly established itself now as an

elegant and powerful approach to characterize the intrinsically dynamic phenomena of biomembranes, and it is applicable to a wealth of biologically exciting systems,” she says. Her team has been characterizing the structures and interactions of membrane-active peptides with antimicrobial, cell-penetrating, or fusogenic functions. “Even these small, innocent-looking peptides tend to show a completely different or more complex behavior than anticipated, and they are also great for method development,” says Ulrich. The group has moved on to larger proteins, she says, to explore aspects such as the response of the transmembrane segments when a signaling receptor gets stimulated. “As a researcher, it is an enormous privilege to create your own playground as your place of work,” she says.

The Scientific Officer/CEO of Ulrich’s group, *Birgid Langer*, helps keep the “playground” running smoothly for the 50 or so scientists in the group, managing elements such as teaching and budget. She met Ulrich in 2003 during her own postdoc at the University of Karlsruhe. Her high opinion of Ulrich was cemented in just two days. “She is a powerful woman, excellent in science,” Langer says. “She is a hard and strong partner in discussion of science and other things.” Ulrich’s collaborator, Yechiel Shai, agrees. “Her lectures are fascinating,” he says, noting Ulrich’s enthusiasm when speaking on science as one of her most defining characteristics. Ulrich and Shai examine the molecular mechanism by which membrane-binding domains of gp41, the envelope glycoprotein of HIV1, shuts down the immune response by interacting with the transmembrane domain of the T-cell receptor. Ulrich’s expertise will help shed light on these interactions on a molecular level. “She is an excellent collaborator who puts in enormous effort to reach the target,” Shai says. The colleagues routinely meet up at the Biophysical Society Annual Meeting, where they initially met many years ago at a shared platform session.

Ulrich and Helle collaborate, too; the sisters’ areas of expertise are disparate enough to encourage fruitful collaboration without engendering competition. Ulrich has

implemented NMR techniques on some of the proteins from Helle’s lab, helping to define a contact site between two interacting partners in the process of DNA repair. To Helle, though,

the most salient aspect of her sisterly and scientific relationship with Ulrich is not experimental results. “Much more important than the scientific collaboration is the strategic advice that Anne gives me with respect to dealings with colleagues, students, or editors,” she says. These days, Helle’s two-year-old son, Philipp, is the main focus of the time the sisters spend together. “Anne takes her duties as an aunt very seriously,” says Helle. At conferences that hold both sisters’ interests, Helle presents her research while Ulrich walks her nephew around the exhibit hall collecting giveaways, and entertaining him in general. “She is very successful in this,” Helle adds.

Ulrich not only looks after her nephew; hedgehogs are always welcome to bunk in the hibernation hut in her garden, where she feeds them throughout the winter months. She admires the spiny creatures. “They are bristly on the surface, though not in an offensive way,” she says. “Once you gain their trust they unfurl so as to expose their soft furry stomachs and they like to be cuddled.” Helle maintains that what she calls her sister’s “spiritual kinship” with hedgehogs dates back to Ulrich’s childhood. “Anne has a knack for hedgehogs,” she says. “Even during her school days she used to take in hoglets for hibernation in our basement.” Watts noticed, too, recalling Ulrich’s trademark “sticky-up hairstyle.”

Though she no longer sports a spiky coiffure, Ulrich maintains her originality all the way down to her field of expertise. “Find your niche,” she says, “as there is no need to chase ‘sexy’ subjects, as long as you feel some genuine excitement about what you are studying.” According to her graduate student *Marco Klein*, Ulrich feels just that: “Her enthusiasm combined with joy for science is highly catching!”



Ulrich with her nephew, Philipp.

55th Annual Meeting March 5–9, 2011

Meet & Greet

First Annual Meeting? Only person from your lab attending? Stop by the Meet & Greet table at the Opening Reception!

Get questions answered by members of the Early Careers Committee, chat with other new members, and even head out to dinner after the Opening Mixer.

Can't wait until March 5? Take part in the Virtual Meet & Greet on the BPS Facebook page, February 21–25. Use this chance to network with international biophysicists, plan get-togethers, and discuss your must-see Annual Meeting events!

Undergraduate Symposium & Graduate & Postdoc Programs Fair

Sunday, March 6, is all about the students!

Don't miss 2011 Emily M. Gray Awardee *Bertil Hille's* talk, Biophysical Methods Decipher Nerve Cell Signals, at the Undergraduate Student Symposium. Then head into the Exhibit Hall to the Graduate & Postdoc Institution Fair, where representatives from biophysics programs from across the globe will be there to answer your questions.

Are you an undergraduate student at an institution within 75 miles of the Baltimore Convention Center? You can get into the Annual Meeting for free all day Sunday! Sign up in advance or show up on Sunday and attend the Undergraduate Student Symposium and the Graduate & Postdoc Institution Fair. While you're there, take a stroll through the Exhibit Hall or even attend a scientific session—free of

charge! Visit www.biophysics.org/2011meeting to sign up.

New Member Welcome Coffee— Don't Forget!

Don't forget to join us for the New Member Welcome Coffee at this year's Annual Meeting in Baltimore. All new Biophysical Society members and those interested in joining the Society are invited to participate in this informal gathering to meet members of the Society's council, executive board and committees, find out about the Society's activities, get acquainted with other new members, and enjoy refreshments. The New Member Welcome Coffee will take place on Monday, March 7, from 10:00–11:00 AM in Rooms 316–317.

Career Center

Need career advice, a résumé overhaul, or help finding employees? Stop by the Career Center at the Annual Meeting, where career consultants *Monica J. Weil* and *Joseph Tringali* will be happy to answer your questions. Visit www.biophysics.org/2011meeting for the Career Center schedule of career workshops and résumé critique sessions. The critiques are popular so sign up early.

Weil, an organizational consultant and executive coach, has operated Lifeblood Consulting Group, Inc., since 2002. She has attracted both large and small life sciences clients such as Biogen Idec, Shire Pharmaceuticals Group, NitroMed, Cardiokine, Boston Scientific Corporation, UCB Research Inc., Epix Pharmaceuticals, and the Biotechnology Industry Organization (BIO). She also has over 25 years of industry experience as an internal organizational consultant and human resources professional in the biopharmaceutical and consumer products industries, doing everything from recruiting and selection to executive coaching and international/cross-cultural/cross-functional group and team development.

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*As of 1/20/11

On Sunday, March 6, only, Tringali will join Weil in conducting one-on-one résumé critique sessions in the Career Center. A seasoned contract recruiter, Tringali has developed overall recruitment strategies for his clients and worked with internal hiring organizations to meet their staffing requirements for more than two decades. He has provided onsite services to numerous biotechnology clients, including Biogen Idec, Millennium Pharmaceuticals, Ariad Pharmaceuticals, Creative Biomolecules/ Stryker, TKT/Shire and Genetics Institute / Wyeth/Pfizer. He also operates a highly ethical and successful contingency recruiting firm that serves the Boston biotechnology community. He works with several clients to help them fill difficult staffing needs in the areas of Research/ Development, Clinical Development and Regulatory Affairs.

Exhibits

Exhibitor Presentations

This year is looking even better than last year. More companies have already signed presenting topics relevant to today's biophysical community. Use the list below to plan your schedule.

Coupon Booklet

Meeting attendees: be sure to look in your registration bag for the Exhibitor Coupon Booklet. These coupons range from a Mini Notebook giveaway to discounts on purchases.

Exhibitor Presentations

Company	Title	Date	Time
Bruker Corp.	Recent Advances in High Resolution Imaging and Nanomedical Measurements Using AFM	Sunday, March 6	11:00 AM–12:30 PM
Nanon Technologies GMGH	Automated Patch Clamp Workshop–Live Experiments	Sunday, March 6	1:00–2:30 PM
Asylum Research	Probing the Nanomechanics of Biological Systems with an AFM - Instrumentation and Applications	Sunday, March 6	3:00–4:30 PM
VARIGroup	Taking Control of Science	Sunday, March 6	5:00–6:30 PM
Nanosurf, Inc.	FluidFM: Combining Atomic Force Microscopy and Nanofluidics in a Universal Liquid Delivery System for Single Cell Applications and Beyond	Monday, March 7	9:00–10:30 AM
Fluxion Biosciences	IonFlux System: Automated Patch Clamp with Plate Reader Simplicity	Monday, March 7	11:00 AM–12:30 PM
Nanonics Imaging LTD	A Next Generation Bio-AFM	Monday, March 7	1:00–2:30 PM
ICX Nomadics	SensiQ Pioneer - Features & Benefits	Monday, March 7	3:00–4:30 PM
Molecular Devices, Inc.	Getting the Most Out of pCLAMP(r) Software	Monday, March 7	5:00–6:30 PM
HORIBA Scientific	Advances in fluorescence based water contaminants analysis	Tuesday, March 8	11:00 AM–12:30 PM

Subgroups

Membrane Biophysics Subgroup—What's New?

Annual Symposium

Each year, the Membrane Biophysics Subgroup organizes an annual symposium to highlight a cutting-edge area of membrane biophysics. The theme for the 2011 Symposium, organized by *Stephen Tucker* and to be held March 5, 2011, will be Single Molecule Approaches to Ion Channel Structure & Function. Confirmed speakers include: *Gabriela Popescu*, State University of New York, Buffalo; *Keiichi Torimitsu*, NTT Basic Research Labs; *Baljit Khakh*, UCLA; *Scott Blanchard*, Weill Cornell Medical College; *Peter Lu*, Bowling Green State University; *Rikard Blunck*, University of Montreal; and *Mark Wallace*, Oxford University. The detailed program is listed on the subgroup website: <http://www.biophysics.org/2011meeting/Program/Subgroups/MembraneBiophysics/tabid/2123/Default.aspx>

The symposium will be followed by the annual Cole Award dinner, which will be held at the Tremont Grand Hotel

(additional details forthcoming). Be sure to attend the symposium and dinner to hear the latest in applications of single molecule approaches to ion channel research and socialize with fellow biophysicists!

2011 Cole Award

The annual Cole Award is presented to a scientist who has made significant contributions to our understanding of membrane biophysics. *David T. Yue*, Professor of Biomedical Engineering and Neuroscience, Johns Hopkins University, has been selected as the 2011 Cole Award winner. Yue's work has focused on voltage-gated Ca⁺⁺ channels, especially their modulation by Ca⁺⁺, calmodulin, and G proteins. See the Yue lab website for more information on his research: <http://web1.johnshopkins.edu/csl/>.

Yue will receive his award at the subgroup dinner following the annual symposium.

Subgroup Email List

The subgroup has an email distribution list. Members may contact *Mike White* (mwhite@drexelmed.edu) for information about sending out email announcements of conferences or meetings.



Win an Apple iTouch® at the Annual Meeting!!!

Don't forget to visit with exhibitors in to get tickets to enter the drawing for an Apple iTouch®. The more exhibitors you visit, the more chances to win. The winner will be announced March 8. Look for details at the meeting.

Drug Discovery for Ion Channels XI Satellite Meeting

The Drug Discovery for Ion Channels XI Satellite Meeting will take place Friday, March 4, 2011, from 8:30 AM–5:15 PM. This meeting is sponsored by MDS Analytical Technologies, Sophion Bioscience, Cellectricon, and Nanion Technologies.

On-site registration will be available.

Obituary

Britton Chance, Eldridge Reeves Johnson Emeritus Professor of Biophysics, Physical Chemistry, and Radiologic Physics at the University of Pennsylvania, died on November 16, 2010, from heart failure at the Hospital of the University of Pennsylvania in Philadelphia. He was 97.

Born on July 24, 1913, in Wilkes-Barre, Pennsylvania, Chance earned his BS and his MS in chemistry and his first doctorate in physical chemistry from the University of Pennsylvania. He earned his second doctorate in biology and physiology from the University of Cambridge. Chance developed a microflow version of a stop-flow apparatus to study enzyme mechanisms and used the machinery to demonstrate the enzyme-substrate complex. He also discovered the quantum-mechanical tunneling qualities of biological electron transfer, which today forms the engineering basis of nanoscale electronic devices. His work to determine bioenergetic activities in cells led to contributions in magnetic resonance spectroscopy imaging in humans and in the clinical diagnosis of breast cancer, muscle dynamics, and cognition. During World War II, Chance joined the Radiation Laboratory at MIT, where he helped develop precision timing and computing circuits for bombing. In 1946, his Guggenheim fellowship took him to the Nobel Institute in Stockholm, where he spent two years working on enzyme kinetics. He returned to the University of Pennsylvania in 1948, and the following year the institution promoted him to Professor of Biophysics and appointed him director of the Johnson Foundation. He was appointed Eldridge Reeves Johnson Professor of Biophysics and Physical Biochemistry in 1964 and University Professor in 1977. His emeritus status became effective in 1983, and he continued to play a very active role in teaching and research.

Chance won the Paul Lewis Award in Enzyme Chemistry in 1950 and was elected to the National Academy of Sciences in 1954. Twenty years later, he won the National Medal of Science.

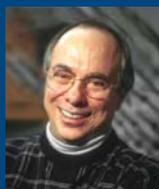
Chance had a passion for sailing. He won an Olympic gold medal in 5.5 meter sailing in Helsinki, Finland in 1952, and won the 5.5 Meter World Championship in England ten years later. He also won several Barnegat Bay Yacht Racing Association championships from the 1930s to the 1950s, and in 2004 was inducted into the Barnegat Bay Sailing Hall of Fame.

Chance is survived by his wife, Japanese biochemist *Shoko Nioka*, whom he married in February 2010. He is also survived by former wives *Jane Earle Lindenmayer* and *Lilian Streeter Chance*, 16 children and step-children, 28 grandchildren, and five great-grandchildren.

Members in the News



Axel Brunger of Stanford University and Society member since 2001 received the DeLano Award for Computational Biosciences from the American Society for Biochemistry and Molecular Biology.



Kevin Campbell of the University of Iowa Carver College of Medicine and Society member since 1979 was presented with the A. Ross McIntyre Award from the University of Nebraska Medical Center.



Tom Rapoport of Harvard University and Society member since 2009 is the recipient of the 2010 van Deenen Medal.

Public Affairs



Jeremy Berg

NIGMS Director Berg to Step Down

Jeremy M. Berg, Director of the National Institutes of Health's National Institute of General Medical Sciences (NIGMS) since 2003, announced in December that he will step down from his post to become associate senior vice chancellor for science strategy and planning in the health sciences at the University of Pittsburgh. He will also be a faculty member in the department of computational and systems biology at the university's School of Medicine. Berg anticipates leaving NIGMS at the end of June 2011, at which point an acting director will be named if the search for a new director is still under way.

"The time I have spent at NIH has been a highlight of my career, and I hope to be able to continue to contribute to this exceptional institution from my new position," said Berg in a released statement.

Berg said he was stepping down in support of the career of his wife, a breast imaging clinical researcher.

As NIGMS director, Berg oversees a \$2 billion budget that primarily funds basic

research. During his tenure, NIGMS issued its first formal strategic plan and embarked on a strategic plan for research training that is due to be completed in early 2011. He also increased support for new investigators and for highly innovative research and spearheaded dialogue with the scientific community through the NIGMS Feedback Loop blog and other interactive outreach efforts.

"Under Jeremy's leadership, NIGMS continued its impressive record of supporting outstanding research and training programs. He also made significant contributions to NIH by serving on key groups, including the NIH Steering Committee and the NIH Scientific Management Review Board, as well as by co-chairing the search committees for a number of important positions," said NIH Director *Francis S. Collins*. "...He has been a leader who is always willing to roll up his sleeves and pitch in. The University of Pittsburgh must be thrilled, as they should be!"

Berg received BS and MS degrees in chemistry from Stanford University in 1980 and a PhD in chemistry from Harvard University in 1985. He received the Biophysical Society's Distinguished Service Award in 2009.

National Science Foundation Target for Cuts by Public

The new House majority leader, *Eric Cantor* (R-OH), selected the National Science Foundation (NSF) as the first target for a "YouCut Citizen Review," in which the American public is being asked to identify wasteful spending that should be cut.

Cantor's website features the YouCut Citizen Review site, which includes a link to the NSF's Award Search site, and a form for people to submit examples of offending projects. "If you find a grant that you believe is a waste of your tax dollars, be sure to record the award number," the website states. "We will publish a report

Report of Interest

Where Good Technologies Come From: Case Studies in American Innovation

In this report, The Breakthrough Institute provides case studies demonstrating that an active partnership between the public and private sectors has been the key to the development of several breakthrough technologies, such as biotechnology drugs.

<http://thebreakthrough.org/blog/Case%20Studies%20in%20American%20Innovation%20report.pdf>

outlining the grants identified by the YouCut community.”

To help the public find projects, the website suggests individuals search for terms such as “success, culture, media, games, social norm, lawyers, museum, leisure, and stimulus.” The site suggests that projects with these terms are in contrast to “worthy research in the hard sciences.”

There is no immediate threat to individual projects; Congress sets the agency’s annual budget, but does not have control over the internal grant-awarding process. There is concern though, that the NSF will be under attack by Congress for certain grants and called to hearings to defend what they are funding.

The choice of NSF as the first target indicates that the science community will have to be diligent about explaining the importance of basic research and the role of peer review in research funding.

America COMPETES Reauthorized

Although it was widely believed that the legislative clock had run out the America COMPETES Reauthorization Act of 2010, H.R. 5116, the Senate, in an unanticipated move, took up and passed a new version of the COMPETES bill in late December and sent it back to the House for final passage. The bill passed by unanimous consent.

The Senate’s bill authorizes spending for three years instead of five years as passed by the House, resulting in an almost 50% reduction in authorized spending. Where the 2007 law called for a doubling of the budgets of the National Science Foundation, DOE Office of Science, and NIST research programs in seven years, the Senate bill aims to double those budgets in ten years. The bill’s authorization amounts for FY 2011, 2012, and 2013 are higher than the FY 2010 appropriations, with

increases, for instance, ranging between 5.1% and 7.0% for the three agencies from FY2011 and FY2012.

In response to the Senate’s action, retiring House Science and Technology Committee Chairman *Bart Gordon* (D-TN) released the following statement on the bill:

“While there have been concessions made, the Senate’s amendments preserve the intent of the *Rising Above the Gathering Storm* report and the original COMPETES. It keeps our basic research agencies on a doubling path, it continues to invest in high-risk, high-reward energy technology development, it will help improve STEM education, and it will help unleash American innovation...I cannot think of anything I would rather do as one of my final acts in Congress than sending this bill, with strong bipartisan support, to the president’s desk.”



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Grants & Opportunities

Name: NIH Blueprint for Neuroscience Research Short Courses in Neurotherapeutics Development

Objective: This FOA solicits Research Education Grant (R25) applications to develop and implement short courses on neurotherapeutics development for academic neuroscientists. The short courses should provide participants with a sufficient overview of the neurotherapeutics development process to (1) understand the steps required for therapeutics development, (2) anticipate and overcome common challenges in the process, and (3) interact effectively with collaborators who have expertise in various aspects of therapeutics development. The short courses should primarily target independent academic neuroscience researchers and senior post-doctoral fellows interested in incorporating treatment development into their research programs.

Application Deadline: April 11, 2011

Website: <http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-12-001.html>

Name: 2011-2012 California Science and Technology Policy Fellowships

Objective: The California Council on Science and Technology (CCST) is pleased to announce that applications are now being accepted for the 2011-2012 California Science and Technology Policy Fellowships based in Sacramento. The S&T Policy Fellowship, a unique one-year professional development opportunity, provides the selected fellows with hands-on experience working with the California Legislature to incorporate science and technology into public policy.

Who May Apply: Eligible applicants will be PhD-level (or equivalent) scientists and engineers who have a sincere interest in California current events, the state legislative process, and a strong desire to learn how policy decisions are made.

Application Deadline: March 31, 2011 at 5:00 PM PST

Website: <http://fellows.ccst.us>

Call for Science Fair Judges

Remember when you were in high school, hard at work on your project for the science fair?

Remember how great it felt to have a bona fide scientist talk seriously with you about your work, and how legitimate your results became because of that interaction? Now a scientist yourself, you can instill that feeling in a lucky high school student: Volunteer to judge at a regional or state science fair near you. If you become the inspiration for one student to continue on to a scientific career, you've made a remarkable difference—not only to that

student, but to the future of your nation's foothold in the STEM fields.

If you let the Society Office know which fair you want to volunteer for, we'll have you present the Biophysics Award to the student with the best biophysics-related project. To get involved, visit www.biophysics.org/AwardsOpportunities/Volunteer.

Make a difference in a high school student's academic life: Volunteer to judge at a regional or state science fair near you.

"I think it is really great that you [Biophysical Society] support the State Science Fair. It was a great experience that I think will greatly benefit my scientific career."

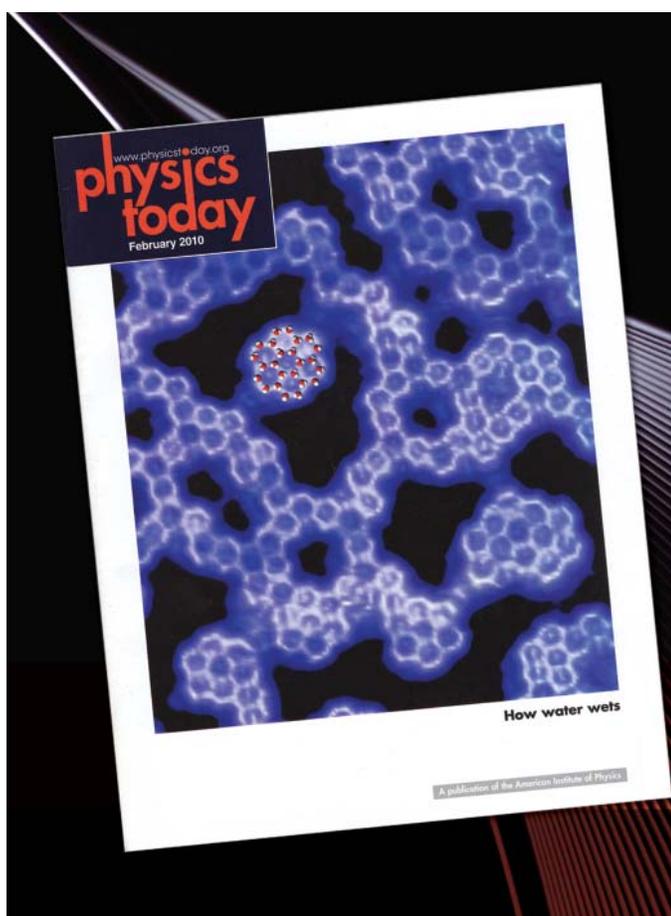
Student: Chad Benoit

Grade: 10

Project Title: *The Amount of Ultraviolet Light Transmitted through Different Fabrics*

School: Bishop Feenan High School, Attleboro, Massachusetts

Winner of the 2010 Biophysics Award at the *Massachusetts State Science & Engineering Fair*



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Editing Wikipedia (for Scientists) Part II

—*Damien Samways*, Early Careers
Committee Chair

Part I of this article can be found in the
December 2010 Newsletter.

Linking to other Wikipedia articles

Should you mention a subject that has its own
Wikipedia page, it is desirable to link the text
appropriately to that page. This is easily done in
one of the following two ways. If the text you
have written referring to the subject is identical
to the title of the subject's Wikipedia article you
simply square bracket the text thus, `[[subject
name]]`; e.g. `[[ligand-gated ion channel]]`.

It may be that the text referring to the subject
differs from its corresponding Wikipedia page
title. In this case include a “|” symbol separating
the title of the Wikipedia page you wish the
descriptive text to link to from the text itself. For
example, to link the text “neurotransmitter-gated
ion channel” to the Wikipedia page entitled,
“Ligand-gated Ion Channel”, you would type the
following into the editor:

```
[[ligand-gated ion channel|neurotransmitter-  
gated ion channel]]
```

Citing and referencing scientific papers

Adding an in-text citation that will automatically
appear in a reference list at the end of the article
is achieved as follows. For the very first citation
of a particular paper, the following code is used:

```
<ref me="pmid12345678">{{cite journal |  
author = Doe JB | title = Relevance of ion  
selection to world peace | journal = Biophys. J.  
| volume = 12 | issue = 3 | pages = 123-456 | year
```

```
= 2005 | pmid = 12345678 | doi = 12.3456/  
s78912-345-6789-1 | issn = }}</ref>
```

As suggested above, you can simply cut this
script from another article and manually change
the information highlighted in bold above.
Ref name can be set to anything, but should
be appropriately descriptive of that particular
reference: e.g. an author name and date, or the
pmid #.

After this first citation of the paper, any
subsequent citations of the same publication
can be made using just the “ref name” tags as
follows: `<ref name="pmid12345678"/>`

Finally, make sure the following script is near the
end of the article in an appropriate place for a
reference list:

References

```
{{Reflist|2}}
```

This will list the references cited in-text in a
format that should appear at the end of article as
follows:

1. ^ Doe JB (2005). “Relevance of ion selection to
world peace”. *Biophys. J.* 12 (3): 123-456.

2. ^^{ab} Samways DW (1885). “A Double
Differential Rheotome”. *J. Physiol.* 6 (6): 293-
299.

Clicking the caret symbol before the author
name in the reference list navigates to the
citations of that reference in the text (if more
than one, the caret is followed by *a*, *b*, *c*, *d*...
etc). Likewise, clicking the citation number in-
text navigates to the citation reference in the
reference list.

Note that references to publications available on
PubMed Central will automatically contain a
link in their title navigating to the full paper.

Further information:

[http://en.wikipedia.org/wiki/
Wikipedia:Citation_templates](http://en.wikipedia.org/wiki/Wikipedia:Citation_templates)

Adding images to articles and Wikipedia Commons

To add an image to a Wikipedia file one of the following must be true:

You created and have full ownership of the image.

The image has been released into the public domain under an appropriate **Creative Commons** license.

Adding new images to Wikipedia articles requires that you first register with the companion site, **Wikipedia Commons**. Before doing this, it's worth looking to see if another contributor has already uploaded an image identical or similar to the one you wish to use. If they have, you can immediately insert this into Wikipedia articles as described below without uploading any new files.

Once registered and logged in to Wikipedia Commons, a new image file can be uploaded by clicking **Upload file** in the left hand side bar. You will be presented with a page inquiring as to the origin of the image file to be uploaded. Click "It is entirely my own work" to get to the uploader with a detailed Step-by-step tutorial to assist you (the uploader form is underneath the tutorial). All your ploaded files can be viewed by clicking **My Contributions** at the top of the Wikipedia Commons page.

To insert an image file from Wikipedia Commons into a Wikipedia article by using the following Wiki markup script in the page editor:

```
[[Image:DestinationFilename|thumb|270px|O  
ptional figure legend can go here]]
```

The **Destination filename** is a name you ascribed to the image when you uploaded it to Wikipedia Commons. Make sure this name is descriptive of the image and fairly concise. The **bolded number** sets the size of the image in the article. You can also add a **figure legend** in the figure box.

Portals

A portal is merely an introductory page with links to other articles covering related topics in a common general category. For example, molecular and cellular biology-related articles can be found via the "**Molecular and Cellular Biology Portal**".

If you create a page with relevance to an existing portal, you should add the following script to the article editor near the very end.

```
{{Portal|Portal name}}
```

Where "portal name" could be "Molecular cell biology", "Neuroscience", "Pharmacology" etc. An article can be assigned to as many portals as is appropriate and relevant given the subject matter.

WikiProjects

If you are interested in contributing to Wikipedia's biophysics-related articles but don't know where to begin, you can go to the **Molecular and Cellular Biology** or **Neuroscience** WikiProject pages for guidance:

WikiProjects refer to large-scale collaborations between contributors to enhance the quality of articles relating to a particular subject. In addition to providing a venue for contributors to discuss articles relating to general topics and synchronize efforts to improve them, WikiProjects such as **Molecular and Cellular Biology** and **Neuroscience** provide useful information on the current standard of related articles (Providing rough graded marks for quality and importance). Here you can determine whether there are articles in need of improvement that are within your area of expertise, and perhaps begin by contributing to these.



BIG DREAMS. BOLD FUTURE.

ASSISTANT/ASSOCIATE PROFESSOR

Department of Molecular Medicine and USF Health Byrd Alzheimer's Institute

The USF Health Byrd Alzheimer's Institute and Department of Molecular Medicine at the USF Health College of Medicine are partnering to identify a candidate for a tenure track position at the rank of Assistant or Associate Professor. A successful applicant will employ structural, molecular and/or computational approaches to develop a mechanism-based drug discovery program related to neurodegenerative disease. The USF Health Byrd Alzheimer's Institute is a unique enterprise that allows investigators to participate in basic and clinical studies directly related to Alzheimer's disease and other dementias in one building. The Institute is the largest of its kind in the world. The Department of Molecular Medicine and USF Health Byrd Alzheimer's Institute are located in a vibrant and expanding USF Health Complex on the main campus of the University of South Florida that includes the Colleges of Medicine, Nursing, and Public Health, and the H. Lee Moffitt Comprehensive Cancer Center and Research Institute. USF is a nationally recognized research campus with extramural grants and contract activity in excess of \$350 million annually and is home to several Centers for Excellence in Biomedical Research and state-of-the-art facilities. Over the past 3 years, the state of Florida committed an additional \$450 million to the existing medical research budget, and as a result, USF is now part of a collaborative research corridor running through the heart of the sunshine state.

Successful candidates for this position are expected to develop and maintain a competitively funded research program, and to participate in medical and graduate education. To support these expectations, the department offers strong institutional salary support, competitive start-up packages, excellent core facilities, and a collegial atmosphere to create an environment that promotes success. Academic rank and salary are commensurate with qualifications and experience. The successful candidate must have a doctorate in a biomedical sciences discipline with at least two years postdoctoral experience. Appointment at the level of Associate Professor requires a minimum of five years experience at the Assistant Professor level, a nationally-recognized and federally funded research program and experience mentoring graduate students.

Please send a cover letter, curriculum vitae, research plan, statement of teaching philosophy, and arrange three reference letters to be sent by e-mail (with attached PDFs) to Ms. Maxine Roth at mroth@health.usf.edu. Review of applicants will begin immediately and continue until the position is filled. **Dr. Chad Dickey, Search Committee Chair, University of South Florida-Health, 12901 Bruce B. Downs Blvd. MDC7, Tampa, Florida 33612-4799**

USF Health is committed to increasing its diversity and will give individual consideration to qualified applicants for this position with experience in ethnically diverse settings, who possess varied language skills, or who have a record of research that support diverse communities or teaching a diverse student population. The University of South Florida is an EO/AA Employer. For disability accommodations, contact Maxine Roth at (813) 396-0746 a minimum of five working days in advance. According to FL law, applications and meetings regarding them are open to the public.



(Wikipedia Continued from page 13.)

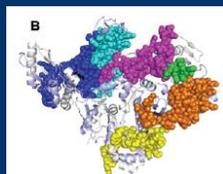
Formatting perfection need not be a goal

It is enough to get your article in a format that generally follows the formatting standard of other well-established and similar articles. Inevitably, there will be minor differences that are quickly identified and corrected, either by enthusiastic formatting-centric co-editors or by the many and pre-programmed **Wikipedia bots** (e.g. "Citation bot 1") that regularly comb the site making necessary adjustments to bring formatting into alignment with the website's standards.

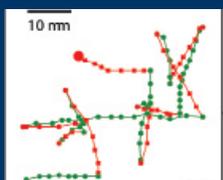
The scientist contributor's efforts are best focused towards accuracy of the information documented, rather than the finer points of its presentation.

Highlighted Papers

Check out the latest highlighted articles in Biophysical Journal. The Associate Editors select papers of interest in each issue. These articles are available through free access for two weeks. To read the full articles visit www.biophysj.org.



Proteins, Nucleic Acids, and Supramolecular Assemblies
Allosteric suppression of HIV-1 reverse transcriptase structural dynamics upon inhibitor binding
James M. Seckler, Mary D. Barkley, and Patrick Winthrode



Cell Biophysics
Implications of 3-step swimming patterns in bacterial chemotaxis
Tuba Altinda, Li Xie, and Xiao-Lun Wu



Summer Course in Biophysics: *Case Studies in the Physics of Life*

May 17–August 6, 2011
University of North Carolina, Chapel Hill

Application deadline: March 1, 2011

Undergraduates can get graduate-level research experience and college credit at the University of North Carolina at Chapel Hill this summer! The 12-week course introduces undergraduate minority students, disadvantaged students, and students with disabilities to the field of biophysics.* All tuition and fees during the Course are covered, and participants receive a stipend for living expenses.

Course includes:

- College credit
- Lectures & seminars
- Mentored research experience
- Team-building activities & field trips

Prerequisites:

- Studying quantitative sciences: chemistry, physics, biochemistry, computer science
- 2 semesters of biology
- 2 semesters of calculus-level physics
- 3.0 cumulative or higher GPA in science courses

**For more information or to
recommend a student, contact:
Erica Retrosi, Course Administrator
eretrosi@biophysics.org, 240-290-5608**



*Financially disadvantaged individuals, students with disabilities, and individuals who have been found to be underrepresented in biomedical or behavioral research are eligible to apply. Nationally, these individuals include, but are not limited to: African Americans, Hispanic Americans, Native Americans/Alaska Natives who maintain tribal affiliation or community attachment, Hawaiian Natives and natives of the US Pacific Islands.

The Biophysical Society Summer Course in Biophysics: Case Studies in the Physics of Life is funded by The National Institute of General Medical Sciences, National Institutes of Health. [T36-GM075791]



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UPCOMING EVENTS

June

June 5-10, 2011

7th International Conference on
Nucleic Acids
Biddeford, ME
<http://grc.org>

June 27-29, 2011

Advances in the Cellular and
Molecular Biology of Angiogenesis
Birmingham, United Kingdom
www.biochemistry/conferences

July

July 1-4, 2011

Society for Experimental Biology
Annual Meeting 2011
Glasgow, United Kingdom
<http://sebiology.org/meetings>

July 16-18, 2011

The 50th Anniversary Symposium of
the British Biophysical Society
Cambridge, United Kingdom
<http://britishbiophysicalsociety.110mb.com>

August

August 22-26, 2011

Synthetic Biology: Design and Engi-
neering Through Understanding
Keele, United Kingdom
www.biochemistry.org/Conferences/

August 23-27, 2011

8th European Biophysics Congress
Budapest, Hungary
www.ebsa2011.org/?nic=topics

September

September 2-8, 2011

ISTCP-VII: The 7th Congress of
the Biophysical Society for Theo-
retical Chemical Physics
Tokyo, Japan
www.chem.waseda.ac.jp/nakai/istp7

September 4-9, 2011

Glutathione and Related Thiols in
Living Cells—ESF-EMBO
Symposium
Sant Feliu de Guixols, Spain
<http://www.esf.org>