

Aldrich Becomes President; Finzi and Jayaraman Elected to Executive Board



Richard Aldrich



Laura Finzi



Vasanthi Jayaraman

Richard Aldrich began his term as Biophysical Society President at the 2011 Business Meeting in Baltimore, Maryland, on March 8, 2011 (see page 2 for Profile). Council members *Laura Finzi* and *Vasanthi Jayaraman* were elected to the Society's Executive Board, replacing outgoing members *Susan Gilbert* and *Cathy Royer*. Finzi and Jayaraman will each serve two-year terms and will serve on the Board with *Peter Moore*, *Richard Aldrich*, *Jane Richardson*, *Dorothy Beckett*, *Linda Kenney*, *Olaf Andersen* and *Ivet Bahar*.

2012 Nominating Committee

Council member *Enrique De La Cruz* was elected chair of the 2012 Nominating Committee. The Committee includes two members from Council and two Society members not currently serving on Council. In addition to De La Cruz, *Peter So* was the other member of Council elected to the Committee. The two non-Council members elected were *Sharona Gordon* and *Erin Sheets*. In addition to the four, *Peter Moore*, Past President, and *Michael Cabalan*, Past Chair, will serve on the Committee ex officio. The Committee serves for one year and develops a slate of candidates for Council and President-Elect, as well as Secretary and Treasurer when those offices come due.



Enrique De La Cruz

Society Award Nominations

Deadline

May 1, 2011

55th Annual Meeting Summary

See page 4

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Biophysicist in Profile

RICHARD ALDRICH

Biophysicist, teacher, musician, prankster: all useful words when describing Richard Aldrich, Professor and Chair of the Section of Neurobiology in the School of Biological Sciences and Karl Folkers Chair II in Interdisciplinary Biomedical Research at the University of Texas at Austin. And on March 7, 2011, Aldrich became the 52nd President of the Biophysical Society.

From a young age, Aldrich held a solid vision of his ability to contribute to science in a meaningful way. “During high school the environmental movement started and I was convinced that I wanted to be a professional ecologist,” he says. This conviction led him to the University of Arizona, where he took almost every available biology course. It was neuroscience, however, that grabbed his interest with such force that he decided to apply to graduate school in this field.

He ended up at Stanford, where his work with *Stuart Thompson* and *Peter Getting* introduced him to ion channels. “We needed large molluscan

neurons to voltage clamp with microelectrodes,” he says. “During this time Neher and Sackmann’s first paper on single channel recordings from acetylcholine receptor channels was published, changing my, and others’, outlook and convincing

“Like other great scientists, Rick has the ability to see the big picture as well as understand the fine underlying details at a deep level, and has no problem linking the two.”

—RICHARD LEWIS

me to pursue postdoctoral training in single channel recording and more quantitative biophysical approaches to channel and membrane function.”

More influential papers followed, reinforcing his conviction to seek such a postdoc. He recalls Anderson and Stevens’ work on fluctuation analysis, Neher and Steinbach’s paper on local anesthetic interaction with ion channels, Hille and Schwartz’s work on selectivity and permeation, and Armstrong and Bezanilla’s papers on gating currents. He took a postdoc position in Yale University’s physiology department, where he was inspired by working with *Knox Chandler* and *Chuck Stevens*. “I learned much from both of them,” he says. “The challenging intellectual environment in the Yale department was critical in my scientific and intellectual development.”

Aldrich likes to do his own intellectual thing. Growing up, his parents reinforced his cerebral independence. His father, an exploration geophysicist for an oil company, taught him about seismic recordings during field visits and found summer jobs for him throughout his college

years with companies doing seismic surveys in the Gulf of Mexico. His mother, a homemaker, contributed to his critical thinking training in her own way; she “actively honed my intellect by insisting that I never got away with opinions that I could not justify, regardless of whether she agreed with me,” says Aldrich.

“I was also greatly influenced by Mr. Grant, my renegade ninth grade science teacher, who believed creative thinking and experimentation were the way to learn science,” he says. Mr. Grant’s labs were akin to a choose-your-own-adventure storybook. “We would often show up for labs where we were only given a topic, such as ‘heat conduction and thermal expansion’ and a bucket full of simple apparatus and materials,” Aldrich says. “Our goal was to find something out and convince him that we had actually learned something.”

Aldrich has continued to use the fundamentals of this independent teaching style, seen as outside the box in the 1960s, in developing his own teaching methods over the years, a task to which he brings no small amount of skill. *Richard Lewis*, Professor of Molecular & Cellular Physiology at Stanford University, has helped Aldrich create innovative courses and teaching methods since the early 1980. “We developed new courses for teaching the physical principles of physiology in a way that allowed students to build their level of understanding from basic concepts—thermodynamics, diffusion, ligand binding and kinetics—to more complex systems [such as] the Hodgkin-Huxley model and examples of extreme physiological adaptations,” says Lewis. Following the same instructive principles, the duo also fashioned a course on ion channel biophysics. “Rick has always been dedicated to developing non-classical, non-didactic and engaging modes of teaching, in which the students are required to bring what they know into the discussion,” Lewis says. “As a result, he is an unusually effective teacher.”

According to Lewis, what he calls Aldrich’s “non-classical approaches” are revealed in his

musicianship, too. Upon meeting Aldrich—Aldrich was a postdoc, Lewis a grad student—he was struck not only by the veritable

library of music Aldrich cultivated but also his exhaustive familiarity with every LP. “What impressed me the most was his record collection—easily 10,000 records, mostly jazz and rock, and his encyclopedic knowledge of them all,” recalls Lewis. Aldrich himself is a drummer, performing with fellow scientists in bands such as Ramon and the Cajals and Fleabit Peanut Monkeys.

Aldrich is also something of a jokester. Whether it’s pulling pranks at the annual departmental retreat, heckling colleagues during talks at conferences, or making humorous comments to his friends, Aldrich certainly keeps it lively. “Rick is the master of biting wit,” says *David Clapham*, Professor of Neurobiology at Harvard Medical School and friend of Aldrich since the latter’s postdoc days. “But they are never mean-spirited,” Clapham adds of Aldrich’s jokes.

Today, Aldrich’s lab is grappling with understanding the coupling of ligand binding and membrane voltage changes to channel opening conformational changes, using simultaneous fluorescence spectroscopy and patch clamp, along with other tools of molecular biophysics. “

Looking ahead, Aldrich continues to see for himself a role in which to meaningfully contribute to science, especially to biophysics. “The confluence of physical science and biological systems offers such a wealth of interesting questions,” says Aldrich. “Future biophysicists will have more integrated training in physical sciences and biology, as opposed to the past where biophysicists came up as one or the other. I hope to help with such integrated training programs.”

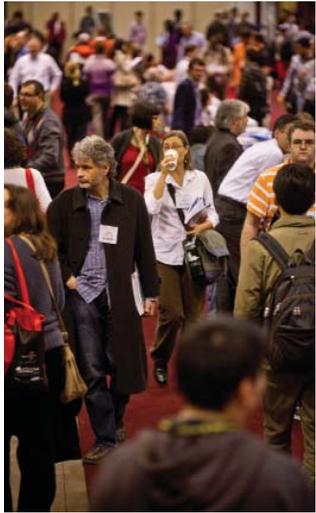


Aldrich playing the drums.

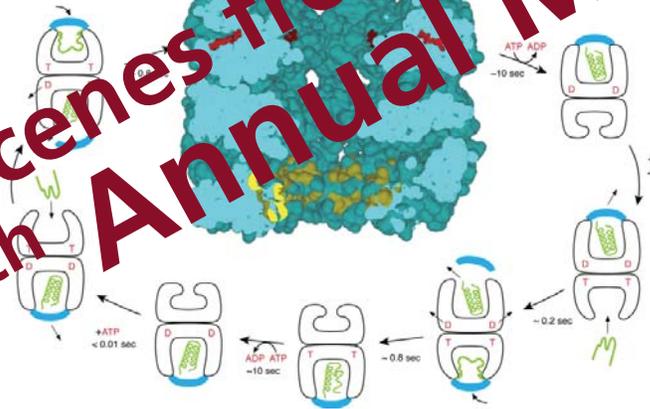


The National Lecture, presented by Arthur Horwich of Yale University, was preceded by the presentation of the Society Awards.

“Apart from the talks, the best of the part of the day was spent reconnecting with numerous scientific colleagues. These are people I usually see only at this meeting, especially the people from overseas. I have always found this kind of networking at Biophysics to be extremely helpful.”
—Prithwish on BPS Blog

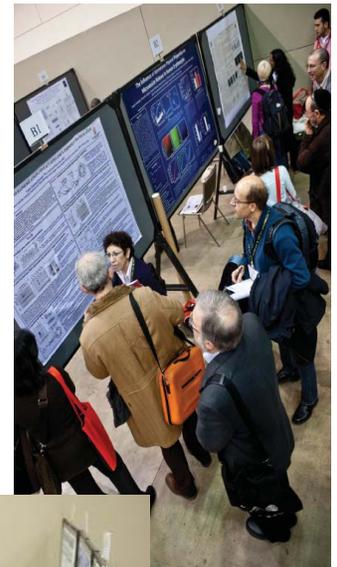


Scenes from the 55th Annual Meeting



“Undergraduate breakfast: Large attendance. It’s never been a better time to major in biophysics”
—drmuinho on Twitter

“Wow. I spent 3 hours presenting my poster to a constant stream of people!! Thanks for all the great discussions everybody!!”
—MyLabView on Twitter



Twenty students received awards in the student research achievement award (SRAA) competition, in which more than 300 students competed. Over 120 additional travel awards were presented by Society committees.





“Rueda combines FRET w RNA mutagenesis to establish a mechanism for the u2/u6 spliceosome. Super cool symposium.”
—Jwaitz on Twitter



More than 6,200 scientists attended the annual meeting, which included daily career-related workshops, a graduate institution fair, student events, and continuous networking opportunities.



Peter Moore, Society President, presented Jamie Williamson, Program Committee Chair with plaque. The Committee developed a program that included 22 symposia, five workshops, four minisymposia, and 62 platform sessions.



“Chris Miller demystifies some of the ‘magic’ of Cl/ H antiporter based on MacKinnon’s xtal structure. A very fun speaker as usual”
—banmans on Twitter



Over 210 exhibit booths filled the exhibit hall, and exhibitor presentations provided hands-on workshops for attendees.

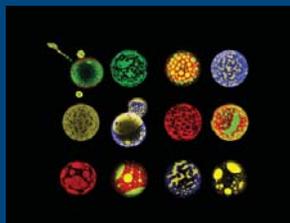


“One of the main reasons I love BPS, ... is that it enables me to get ideas from scientists who are primarily biologists, or primarily physicists, or primarily something in between or completely out of this range. It is the most interdisciplinary specialized meeting I’ve attended.”
—markitalandry on BPS Blog

Image Contest

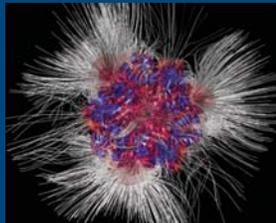
The Biophysical Society received over 50 submissions for the first annual Image Contest, sponsored by Photometrics. The 10 finalist entries were displayed at the Annual Meeting and attendees voted for their two favorite images. The prizes were donated by Asylum Research and winners were announced in the Exhibit Hall and on Twitter Wednesday, March 9. The images can be viewed on the Society website at www.biophysics.org.

1st
Place



Membrane Domains in Giant Liposomes
Jorge Bernardino de la Serna

2nd
Place



Electrostatic QPRTase Hexamer
Eric di Luccio

3rd
Place



Niosome
Brigitte Papahadjopoulos

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Apple iTouch

The Biophysical Society would like to thank all 55th Annual Meeting attendees for the incredible number of entries submitted in the Apple iTouch raffle. Congratulations to Deepu George, SUNY Buffalo, on being this year's winner.



Planning for 2012 Program Well Underway

The 2012 Program Committee, co-chaired by *Sharona Gordon* and *William Zagotta*, both from the University of Washington, has nearly finished developing the program for the 2012 Annual Meeting, which will be held in San Diego, California, February 25–29, 2012. The 2012 Program Committee members are *Laura Finzi*, Emory University; *Tanja Kortemme*, University of California, San Diego; *Michael Wiener*, University of Virginia; *Michael Cabalan*, University of California, Irvine; and *Jamie Williamson*, Scripps Research Institute.

How is the Scientific Program for the Annual Meeting Developed?

In August of each year, the newly elected President-Elect names a Program Chair to oversee the development of the scientific program for the Annual Meeting to be held three years later. The Chair(s), together with the Program Committee, which includes four members of Council serving three-year terms on a rotating basis and the past Program Chair, develop a program that represents the diversity in the scientific areas, demographics, and geography of the Society membership as well as the best and most exciting biophysics in the world. That program is presented to Council for approval one year before the actual Meeting. The 2012 program was approved by Council when it met in Baltimore.

1. Program Chair Appointed

Three years prior to the Annual Meeting, the President-Elect appoints a Program Chair. The Chair works with the existing Program

Committee and adds members to the Committee for a one-year term if necessary to provide greater breadth of scientific areas.

2. Request for Topic Suggestions, and Review of Past Programs and Attendance

Each fall, the Program Committee solicits suggestions from the Society membership, subgroup chairs, and committee chairs for possible symposium and workshop topics and speakers. The Committee also looks at recent past meeting topics and attendance to ensure that speakers and topics are new and fresh. Topics for the 2012 Meeting were solicited in the fall of 2010.

3. Program Development

Over the course of a year, the Program Committee members analyze data, review all suggestions, and develop symposia, workshops, and minisymposia topics based on their analyses.

4. Council for Feedback and Approval

One year before the Meeting, the Program Chair(s) presents the proposed program to Council for approval. If approved, the proposed symposia and workshops chairs and speakers are invited and, once confirmed, the Call for Papers/Meeting announcement is prepared and mailed. Minisymposia topics are also included in the Call for Papers, but the minisymposia speakers are selected from among abstracts submitted to the individual minisymposia topics.

5. Abstract Sort

After the abstract submission deadline, members of Council and the Program Committee sort all abstracts into platform, minisymposium and poster sessions. Once the sorting is completed, the Program Chair(s), together with past chairs, program the sessions and send the final program to all members of Council who review the schedule for possible programming conflicts.

Members in the News



Joshua Shaevitz of Princeton University and Society member since 2002 received the Presidential Early Career Award for Scientists and Engineers.



Michael Summers of the University of Maryland, Baltimore County and Society member since 2000 was awarded the Protein Society's 2011 Carl Brändén Award.



Brenda Schulman of St. Jude Children's Research Hospital and Society member since 2011 was awarded the Protein Society's 2011 Dorothy Crowfoot Hodgkin Award.



Gerhard Wagner of Harvard Medical School and Society member since 1993 was awarded the Protein Society's 2011 Stein and Moore Award.



D. Wayne Bolen of University of Texas Medical Branch and Society member since 1978 was awarded the Protein Society's 2011 Christian B. Anfinsen Award.



Jeffery W. Kelly of Scripps Research Institute and Society member since 1996 was awarded the Protein Society's 2011 Emil Thomas Kaiser Award.

Carla Coltharp (not pictured) of Johns Hopkins University and Society member since 2011 was awarded the Turock Young Scientist Award, January 2011.

AAAS Fellows

Fifteen Society members were named AAAS Fellows in February. They are listed within sections below.

Biological Sciences

Edward Hawrot, Brown University, Society member since 1991; *Bernhard Palsson*, University of California, San Diego, Society member since 2003; *Michael Smerdon*, Washington State University, Society member since 1982.

Chemistry

Steven Ealick, Cornell University, Society member since 2001; *Rustem Ismagilov*, University of Chicago, Society member since 2007; *Ruth Stark*, City College of New York, Society member since 1982; *Michael Stone*, Vanderbilt University, Society member since 1986.

Engineering

Bahman Anvari, University of California, Riverside, Society member since 2011; *Robert Clark*, University of Rochester, Society member since 2005; *Michael Deem*, Rice University, Society member since 2003.

Medical Sciences

R. John Collier, Harvard Medical School, Society member since 1995; *Alfred George*, Vanderbilt University, Society member since 1992; *Qing Wang*, Cleveland Clinic, Society member since 2007.

Pharmaceutical Sciences

Barry Gold, University of Pittsburgh, Society member since 2002.

Physics

John Wikswo, Vanderbilt University, Society member since 1980.

Public Affairs

Obama Releases FY12 Budget

President *Barack Obama* released his FY 2012 budget request on February 14. Set against the second year of a proposed five-year freeze in total non-security discretionary spending, the Science and Technology request is a reaffirmation of the President's belief in the importance of science and technology to strengthen the nation's economic and national security. The requests for the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Department of Energy (DOE) Office of Science are all increases over the FY 2010 budgets for those agencies.

For NIH, the President has proposed \$31.7 billion in budget authority for FY 2012, a \$745 million (2.4%) increase over FY 2010 comparable levels. An amendment to the NIH budget request is expected later this spring to accommodate changes within NIH as a result of the proposed National Center for Advancing Translational Sciences.

For the National Science Foundation (NSF), the President has requested \$7.8 billion, a 13% increase from the FY 2010 level of \$6.9 billion. The NSF, along with the Department of Energy's Office of Science, and the research programs of the National Institute of Standards and Technology have been put on a budget-doubling track. President Obama is continuing an initiative launched by President *George W. Bush* in 2006 to double funding for these agencies to ensure US leadership in science and technology. Recommendations to double this funding were made in the *Rising above the Gathering Storm* report, and were the foundation for the original America COMPETES Act and its recent reauthorization.

Under the request, the budget for the DOE Office of Science would increase by 9.1%, or \$452.2 million, from \$4.96 to \$5.4 billion.

The FY 2010 appropriation contained \$74.7 million for congressionally directed projects (earmarks) for which the Department did not request funding; this money will be able to be spent elsewhere within the DOE Budget. Congress has prohibited these projects for 2011 and 2012.

An FY 2011 appropriation bill had not been enacted when the President released the FY 2012 budget. The Administration is comparing its FY 2012 budget request to an adjusted FY 2010 appropriation for this reason.

NCCR Taskforce Recommendations on NCCR Programs Released

In December, NIH Director Francis Collins announced plans to create a new institute at NIH, the National Center for Advancing Translational Sciences (NCATS), with the mission of supporting and strengthening translational medicine and therapeutics development. In order to make room for NCATS, Collins has announced that The National Center for Research Resources (NCCR) will be disbanded. NCCR programs will continue and will be placed in other Institutes and Centers.

In February, the NCCR Task Force made its final recommendations regarding placement of NCCR programs once NCCR is disbanded. The Task Force recommendations, which, are posted on the Feedback NIH website and can be found at <http://feedback.nih.gov>.

The Biophysical Society sent a letter to the NCCR Task Force expressing concern about the continuity of NCCR programs as they are moved to other Institutes, and the fate of programs slated for a temporary Infrastructure Entity.

Congress is currently reviewing NIH's request to restructure.

Dynamic DNA Packaging Across Kingdoms: Chromatin & Beyond

July 5–8, 2011
Asilomar, California, USA

Biophysical Society

In recent years there have been significant advances in our understanding of the hierarchical structure, packaging, mechanical forces, and biochemistry of both the eukaryotic chromosome and the prokaryotic genome.

This meeting seeks to bring together biophysicists, physicists, biochemists, and molecular biologists in a pleasant informal setting to discuss current research, identify the most significant outstanding questions and find integrated, interdisciplinary approaches to solving them. This meeting will also provide opportunities for attendees to present their research as additional speakers will be selected from poster the abstracts submitted.

Organizers: Linda Kenney, *University of Illinois, Chicago*; Corey O'Hern, *Yale University*;
Lynne Regan, *Yale University*

Speakers

- Sankar Adhya, *NCI, NIH*
- Dorothy Beckett, *University of Maryland*
- Robijn Bruinsma, *University of California, Los Angeles*
- Mair Churchill, *University of Colorado, Denver*
- Patrick Higgins, *University of Alabama at Birmingham*
- Megan King, *Yale University*
- Karolin Luger, *Colorado State University*
- Simon Mochrie, *Yale University*
- John van Noort, *Leiden Institute, The Netherlands*
- Robert Phillips, *Caltech*
- Michael Poier, *Ohio State*
- Daniella Rhoades, *Lab of Molecular Biology Medical Research Council, Cambridge, UK*
- Catherine Royer, *University of Montpellier, France*
- Helmut Scheissel, *Leiden Institute, The Netherlands*
- G.V. Shivashankar, *National University of Singapore*
- Jean Thomas, *Cambridge University, UK*
- John Widom, *Northwestern University*
- Sunney Xie, *Harvard University*
- Jie Yan, *National University of Singapore*

Important Deadlines

Late Abstract Submission..... April 24, 2011
Registration & Housing Deadline.. April 24, 2011

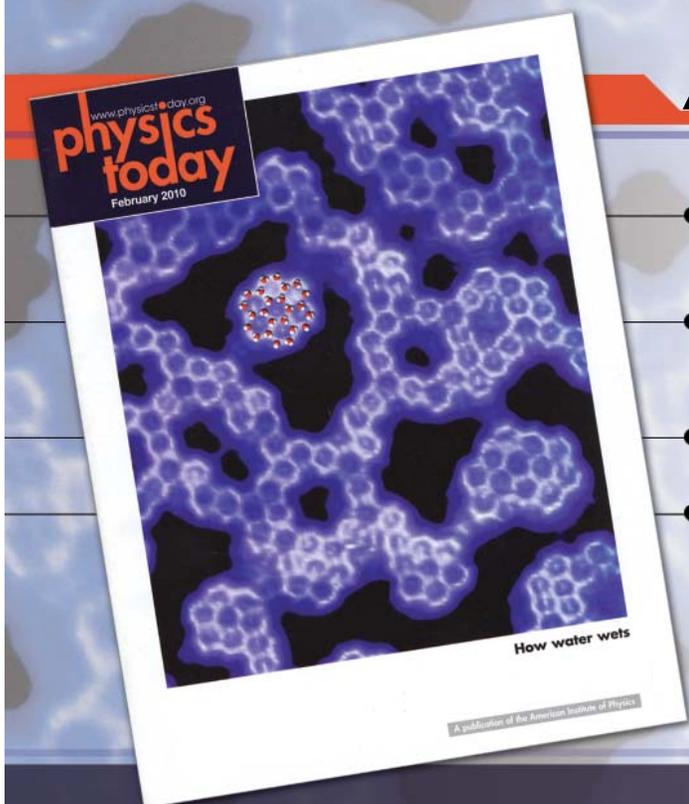
Registration Rates

BPS Member*	\$350
Non-Member	\$400
Student Member*	\$175
Student Non-Member	\$200
Guest	\$125

*Must be a current 2011 member to receive discounted rate

For more information visit
www.biophysics.org/
2011chromatin

Travel Awards are available. See website for details.



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Grants and Opportunities

Name: NSF Biomolecular Dynamics, Structure, and Function

Objective: The cluster gives high priority to the creative projects that address the relationships between structure, function, and dynamics in studies of individual biomolecules and their complexes by an integrated approach of theory, computation, and experimental methods such as NMR, X-ray crystallography, EPR, and optical spectroscopy including single molecule methods.

Application Deadline: July 12, 2011

Website: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503609

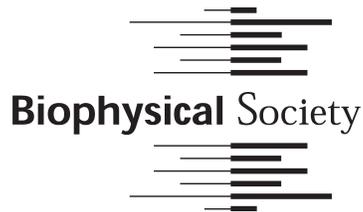
Name: NIH Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows

Objective: To provide support to promising fellowship applicants with the potential to become productive, independent investigators in scientific health-related research fields relevant to the missions of participating NIH Institutes and Centers.

Who May Apply: Any applicant fellow with the skills, knowledge, and resources necessary to carry out the proposed research as the Project Director/Principal Investigator (PD/PI) is invited to work with his/her sponsor and organization to develop an application for support.

Application Deadline: August 8, 2011

Website: <http://grants.nih.gov/grants/guide/pa-files/PA-11-113.html>



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UPCOMING EVENTS

June

June 1-5, 2011

Chromatin and Epigenetics
Heidelberg, Germany
www.embl.de/training/events/2011/CHR11-01/index.html

June 26-July 1, 2011

Bioenergetics
Andover, New Hampshire
<http://grc.org/programs.aspx?year=2011&program=bioenerg>

July

July 5-8, 2011

Dynamic DNA Packaging Across Kingdoms: Chromatin & Beyond
Asilomar, California
www.biophysics.org/2011chromatin

July 10-15, 2011

Visualization in Science & Education
Smithfield, Rhode Island
<http://grc.org/programs.aspx?year=2011&program=visualiz>

July 12-14, 2011

8th BSPR-EBI Meeting
Cambridge, United Kingdom
www.bspr.org/

August

August 18-21, 2011

WACBE World Congress on Bioengineering 2011
Tainan, Taiwan
<http://conf.ncku.edu.tw/wacbe2011/>

August 23-27, 2011

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

September

September 14-17, 2011

The 8th International Conference on Group IV Photonics
London, England
www.photonicsconferences.org/GFP2011

September 8-11, 2011

[SISPAD] 2011 International Conference on Simulation of Semiconductor Processes and Devices
Tokyo, Japan
www.si.eei.eng.osaka-u.ac.jp/sispad/2011/