Modeling membranes, nanomagnets to control cell activity, and a gain-of-function protein behind a severe progressive brainstem disorder were among the hot topics at the 2013 ASCB Annual Meeting in New Orleans, December 14–18. This year, ASCB continued the tradition of weaving two threads—biophysics and medicine—through many of the 254 science presentations. (Events in the meeting’s third thread—professional development—are covered throughout the Annual Meeting Highlights section starting on p. 17.)

Unmasking Cancer Stem Cells and Sequencing on Mars—Fuchs and Venter Give ASCB 2013 Keynotes

Consider it a triumphant return appearance. Their roles and most of all their science had changed in the dozen years since Elaine Fuchs, then president of the ASCB, introduced her keynote speaker at the 2001 ASCB Annual Meeting, Craig Venter. That had been during Venter’s first big moment in the world media spotlight as head of Celera, his private “shotgun” gene sequencing company that had just completed the first draft of the human genome in an uneasy alliance with the public consortium led by the National Institutes of Health. Already a leading

Keynote, continued on p.10
I am very excited and honored to serve as President of the ASCB for 2014, its 54th year. I joined ASCB as a graduate student in 1985 and have been to most of its Annual Meetings since then. What I experienced at those meetings has had a huge impact on my scientific development because of the unique opportunity it afforded me to hear from colleagues throughout the field of cell biology. Along the way I also came to appreciate how much ASCB contributes to the development of our scientific discipline, to the professional training of scientists, and to the education of the general public throughout the year. Now we face the challenge—and the opportunity—of welcoming scientists from other disciplines into the fold as the physical and computational sciences become more and more important to cell biology.

ASCB Does Not Just Happen
The realization of how far-reaching and important ASCB’s activities are did not come all at once to me. My first few ASCB meetings as a graduate student were spent presenting posters of my fledging research, roaming the Exhibit Hall, and viewing many of the thousands of posters. While at these posters, I realized cell biologists were eager to answer my simple, sometimes whimsical, questions about their research and to speculate broadly about other, bigger questions. What can I say?—It was a blast! Combined with the plenary and Minisymposia, I was learning more than I could ever have imagined, not only about my own topics of focus, but about other issues throughout the field of cell biology. I soon appreciated how important such interactions are to my own research and to understanding where that research fits into the larger quest to describe and understand the functions and mechanisms of the cell. The conversations I had each year at the Annual Meeting influenced what questions I was addressing, the experimental approaches I took to study them, and how I interpreted and communicated results. Going to the Annual Meeting soon became an annual pilgrimage for me, where I could become immersed in the zeitgeist of cell biology.

Over time, I came to appreciate that the Annual Meeting and all of ASCB’s other, year-round programs did not just happen, but were developed and sustained by a group of dedicated scientists who selflessly gave their time to make the Society work. These people decided what topics should be covered at each meeting, how posters and talks should be organized, and what outreach efforts to the public and other scientists by the Society were required. It was only through their efforts that ASCB could operate as the epicenter of cell biology, defining its foundational principles and providing professional and educational opportunities to scientists and nonscientists alike. I became interested in participating in the process and soon was volunteering to help sort abstracts for meetings and helping to make local meeting arrangements. Later I became program chair, and then served on Council. Now I have the privilege to serve as the Society’s President.

In this role, I chair the Council, help set the Council’s agenda focusing on strategic decisions to promote ASCB’s growth and programmatic and financial vitality. The President and Council set the agenda but do not develop or implement the plan. That is the job of our dedicated Executive Director, Stefano Bertuzzi, aided by the professional staff members on his team.

Expanding Our Field
Perhaps more than any other time in its history, ASCB is seeing new faces joining us, from outside the traditional ranks of biology. These include physicists, bioinformaticists, and engineers seeking to apply their new tools to cell biology questions and to learn the language and biology of cells. In the rest of my inaugural
President's Column

This month, I want to focus on these new faces at ASCB and how we can serve them and our membership to promote the vitality of our Society. Let me begin by sharing my own bias (and I say this not only because my daughter is a physicist): that the thinking and methodologies of the physical sciences are playing an increasingly important role in the understanding of biological systems. The evidence is all around us in the form of technological innovations in multi-scale microscopy, image analysis, and computational modeling. This is enabling the physical principles of cell activity to be studied in ways previously deemed impossible. For this reason, just as an increasing number of physical scientists are attracted to problems of biology, a growing number of biologists are seeking ways to use the tools and thinking from computation, physics, chemistry, and engineering. Our colleagues from the physical sciences who are now coming to our Annual Meeting are not finding it easy, however. They must deal with daunting terminology and with the messy complexity of biological data. They also face cultural challenges, since the biologists they interact with sometimes have difficulty understanding how the quantitative tools of physics can advance their science. This rift separates two areas of science that are naturally trying to converge.

How is the ASCB trying to rectify this rift? One strategy, spearheaded by Ron Vale in his presidency and continued by Don Cleveland in his, has been the introduction of specially designed sessions at the Annual Meeting for learning about the intersection of cell biology and physical sciences. These packed sessions have included the special Saturday workshop Open Problems in Biology. Requiring the Physical Sciences and Minisymposia and poster sessions on how the physical and computational sciences are being applied to biology. This strategy has paid off with more scientists—both beginning researchers and senior scientists—thinking of new strategies to integrate physical science principles into their work.

Publishing at the Intersection of Two Disciplines

There is an important element still lacking for scientists working at this interface, however. I believe we need a robust publishing platform to draw them together and nurture this new field. In my experience, journal editorial boards are understandably skewed either to traditional areas of cell biology or to the physical sciences, making it difficult to find a home for “intersectional” papers. Also problematic is the difficulty in publishing the type of data typical of these crossover studies. Most journals today are unable to publish and archive, let alone integrate, the large datasets that are increasingly typical of imaging and systems analysis/modeling research. As far as I am aware, there are no journals with a capacity to handle large-scale data (including storing and archiving huge data files and enhancing functionalities of data viewing, such as linking 3D videos to pictures online). How then can we effectively disseminate this type of scientific information and allow researchers to build on primary data and extend research further?

I don’t have an easy answer. However, as one forward step, at ASCB we are planning a special issue of Molecular Biology of the Cell (MBoC) devoted to topics at the interface between cell biology and the physical/computational sciences. Publication of the issue will coincide with the Annual Meeting in Philadelphia in December 2014. The centerpiece of the special issue will be a series of Perspectives on key developments in this emerging field. And we strongly encourage researchers who work at the intersection of cell biology and the physical/computational sciences to submit their original research articles, including methods papers, for this (or subsequent) issues of MBoC. We welcome ideas for this volume, including new ideas for how to disseminate intersectional knowledge through innovative publication.

MBoC’s commitment to this new field extends beyond the special issue. The hope is to use this publishing effort as a jumping off point for publishing more intersectional papers. Authors of such papers will find MBoC very receptive to such articles and will take steps to ensure that such submissions are appropriately and constructively reviewed. I encourage anyone who is interested in contributing to the special issue or in submitting intersectional research articles to contact David Drubin, the Editor-in-Chief of MBoC (mboc@ascb.org).

Authors of original research articles at the intersection of cell biology and the physical/computational sciences will find that MBoC is very receptive to such articles.

The dissemination of research at the intersection of cell biology and the physical/computational sciences is open territory at this point, so we welcome suggestions from our membership on how to develop this publishing forum for cross-talk between the physical and computational sciences and cell biology. And I look forward to working with the ASCB membership on these and other ideas for furthering the traditions of a Society that supports its members in cutting-edge research while explaining to the wider scientific community and the public at large why cell biology matters, and why it is fun.

Look for the MBoC Special Issue on Quantitative Biology in November 2014

Jennifer Lippincott-Schwartz, Guest Editor

MBoC Welcomes Papers at the Intersection of Cell Biology and the Physical/Computational Sciences

Recognizing the profound influence that concepts and technologies from the physical and computational sciences are having on cell biology, Molecular Biology of the Cell (MBoC) welcomes research articles, including methods papers, in:

- Quantitative imaging
- Superresolution imaging techniques and their applications
- Biophysical properties of cells and cell structures
- Computational and mathematical modeling
- Systems studies of cell signaling and complex physiological processes
- Innovative physical or computational approaches to cell biological problems

Results of your research will be highly visible to cell biologists, including more than 10,000 recipients of MBoC’s electronic tables of contents. Leaders in the field know that MBoC presents conceptual advances of broad interest and high quality.

Visit www.molbiolcell.org or contact Editor-in-Chief David Drubin at mboc@ascb.org.
Biophysical Approaches to Understanding the Cell
Kicking off the biophysics thread was the Saturday special interest subgroup called Building the Cell. Among the presenters was bioengineer Dan Fletcher of the University of California, Berkeley, who described new work on reconstituting cell membranes. When starting the project, Fletcher said, he wanted to know how the size of a molecule influences its ability to segregate at membrane interfaces.

To answer the question, Fletcher together with Eva Schmid, Matt Bakalar, and colleagues made a model of membrane interfaces with giant unilamellar vesicles and various synthetic proteins of different sizes. They found that exclusion of proteins at interfaces is size dependent and does not require active help from the cell. This exclusion is important for cell processes like T-cell activation, Fletcher believes, where adhesion molecules with large extracellular domains are excluded from regions where ligand-receptor pairs interact.

Later on Saturday at the Molecular Sensors and Actuators special interest subgroup, Mathieu Coppey of the Institut Curie in Paris explained how his lab deployed “nanomagnets,” super-paramagnetic nanoparticles coated with signaling proteins, to study localized signaling at specific subcellular locations and observe the larger magnet outside the cell to localize them. When nanomagnets have been introduced into cells, the researchers then use a membrane interface with giant unilamellar vesicles and various synthetic proteins of different sizes.

Coppey said that the work demonstrated that signal transduction is really compartmentalized in the cell. “We expected that the signal would spread but everything that we activated stayed local… that was a big surprise.”

P-granules were the focus Monday at the Physical Biology of the Cell Symposium, where Frank Jülicher, director of the Max Planck Institute for the Physics of Complex Systems in Dresden, spoke about the organization of the cell cytoplasm by phase separation. P-granules are non-membrane-bound assemblies of proteins and RNA in lipid drops that Jülicher compared to vinegar in an oil emulsion. Because they act like an emulsion, the granules undergo Oswald ripening. The contents of smaller lipid drops dissolve and are redeposited in more energetically stable larger drops.

At the “Emerging Technologies” workshop on Tuesday, Feng Zhang described genome editing with CRISPR gene-snippering enzymes derived from the yogurt bacterium Streptococcus thermophilus. CRISPR is an anti-phage defense used by the bacterium. Since 2011, Zhang’s lab has worked to modify CRISPR for genome editing. They were able to optimize CRISPR design, and now researchers can access all of Zhang’s CRISPR reagents at Addgene.

Cell Biological Approaches to Understanding Disease
The medicine thread for Sunday included the Frontier Symposium in Cell Biology and Medicine, at which Huda Zoghbi of the Baylor College of Medicine presented her pioneering work on Huntington’s disease.

Zoghbi, director of the Frontier Symposium in Cell Biology and Medicine, at which Huda Zoghbi of the Baylor College of Medicine presented her pioneering research on Spinocerebellar Ataxia 1 (SCA1), a progressive brainstem and ataxia dysfunction that her lab has been studying since 1993. More recently, her lab demonstrated that SCA1 pathogenesis is caused by a gain-of-function mechanism in the protein ataxin-1 and that reducing ataxin-1 slows the disease pathology. Zoghbi’s findings indicated that phosphorylation at position S776 is a potential therapeutic target.

In following up, Zoghbi described how her lab has worked to modify CRISPR for genome editing. They were able to optimize CRISPR design, and now researchers can access all of Zhang’s CRISPR reagents at Addgene.

Science Highlights, continued on p. 9
Do you want to Organize a One-Day Local Meeting?

ASCB Financial Support Available

Accelerate your career with ASCB’s help: let us help you organize your local meeting. Such meetings will typically involve two or more local research institutions or colleges (within or outside of the USA). Topics can range from basic science to career development, as long as there is clear relevance to the broadly defined field of cell biology.

For more information go to www.ascb.org and click on “Meetings”, then “Local Meetings” or email ssalzer@ascb.org.

Next Deadline for Applications: April 1, 2014

Postdocs/Grad Students

ASCB Financial Support Available

For more information go to www.ascb.org and click on “Meetings”, then “Local Meetings” or email ssalzer@ascb.org.

Next Deadline for Applications: April 1, 2014

Are You Getting ASCB Pathways?

You should now be regularly receiving our monthly email update, ASCB Pathways—alerting you to the latest ASCB happenings and Annual Meeting updates. If you aren’t seeing the e-newsletter in your inbox, please check your spam filter, and/or contact your system administrator to whitelist *ascb.org.

ASCB Member Benefit: One-on-One CV Review

Need some help with a cover letter, CV, resume, statement of teaching philosophy, or other document for the next step in your career? Members of the ASCB are willing to help. Just fill out a short form (www.ascb.org), and we’ll put you in touch with a reviewer. Then the two of you can decide which digital collaboration tool to use (email, Google Docs, Skype, Wikispaces, etc.). You must be an ASCB member to take advantage of this service.

—Thea Clarke

Science Highlights, continued from p.6

of ataxin-1 amyloid oligomers correlates with disease progression. Additionally the researchers found that these mutant ataxin-1 oligomers propagate, although it’s not yet clear how that spreading correlates with disease. However, targeting these ataxin-1 oligomers with passive immunotherapy rescues motor defects in mice with a disease phenotype.

Speaking on Tuesday at the session entitled Tumor Microenvironment as a Driver and Target in Cancer Progression, Johanna Joyce, a cancer biologist at Memorial Sloan-Kettering Cancer Center, said that in looking for new strategies to treat glioblastoma, her lab turned to non-tumor cells that are part of the glioma microenvironment, the cancer’s cellular neighbors. In particular, her lab zeroed in on tumor-associated macrophages (TAMs). TAMs are normally the brain’s front-line immune cells, and they depend on colony-stimulating factor-1 (CSF-1) for differentiation and survival. When the Joyce lab used an inhibitor of the CSF-1 receptor to target TAMs in a mouse model of glioblastoma multiforme, the treated mice survived many months beyond the control cohort.

At the final Minisymposium in the medicine thread, Cancer Cell Biology, Sarah Hymowitz of Genentech showed how the BRAF-MEK complex reveals diverse mechanisms of pathway dysregulation. Growth factor receptor pathways drive many cancers, she said. The BRAF V600E mutation is found in more than 60% of melanomas and promotes MEK signaling. BRAF and MEK form a stable complex in vitro, and Hymowitz and colleagues determined the crystal structure of the complex. They then used conformation-specific BRAF inhibitors and showed that the interaction between BRAF and MEK can lead to changes in pathway activation.

At the same session, Mikala Egeblad from Cold Spring Harbor Laboratory told the audience how the neutrophil extracellular traps (NETs) that capture and kill bacteria can also serve to enhance cancer metastasis. Egeblad described how metastatic tumor cells can recruit neutrophils and trigger neutrophils in their vicinity to “cast” NETs. And this, she found, enhances the ability of tumors to invade and spread through the activity of the digestive enzymes in the NETs. Most intriguingly, her team used DNase to digest the DNA scaffold of the NETs. The effect was to reduce the ability of the tumor cells to form metastases in mice. Since DNase was shown in animals to counter metastasis, there is the prospect, says Egeblad, that the enzyme might have a role in human cancer therapy.

While the scientific outlook at the 2013 Annual Meeting was bright and sunny, a cloud of pessimism about science funding, especially in the United States, hung over many of the participants, including 2013 Nobel Prize winner James Rothman, who told a special plenary session that shortsighted federal support cutbacks were “crushing” basic science. But 2013 ASCB President Don Cleveland saw the bright lining in the thunder cloud—exciting science is always its best demonstration of value. “Basic science is the way to do translational research,” Cleveland said.

—Christina Szalinski

—Thea Clarke

—Thea Clarke
investigator of stem cells, a term that was just coming into the public consciousness in 2001, Fuchs was about to move to the Rockefeller University in New York City. In New Orleans last month for the 2013 ASCB Annual Meeting, Fuchs and Venter shared the keynote platform with talks that showed just how much cell biology has changed in 12 years. (Videos of both keynotes are at www.ascb.org/2013-annual-meeting-videos.)

136 Years of Stem Cell Research
Fuchs spoke on the origins of the term stem cell, tracing it back to the German biologist Ernst Haeckel in 1877 and its popularization by the American biologist E.B. Wilson in 1896 as a synonym for what we would now call a germ cell in developmental biology. The modern meaning of stem cell as the pluripotent source for all subsequent differentiated cells in a lineage took decades to evolve, and it wasn’t until 1961 that James Till and Ernest McCulloch clearly demonstrated the existence of hematopoietic stem cells in bone marrow. The successful culturing of adult stem cells took until the mid-1970s, by which time Fuchs was already at the forefront as a postdoc in the Massachusetts Institute of Technology laboratory of Howard Green. The Green lab discovered how epithelial stem cells in the hair follicle as a model system, the Fuchs lab has painstakingly developed a novel normal stem cells look like.” The concept that cancer stem cells and their normal counterparts. Normal stem cells...are closely related to those that drive cancer stem cell’s decision to make tissue or remain quiescent. The mechanisms that control a hair follicle stem cell’s...decision to make tissue or remain quiescent are...closely related to those that drive cancer stem cell’s. “This is not what cancer stem cells look like.” The concept that cancer cells behave as stem cells gossips over the past differences between them.

Creating a Digital Biology
Venter was happy once again to follow Fuchs into the public present. From her earliest days in the Green lab through to her...regulated has been her single research objective as a postdoc in the Massachusetts Institute of Technology laboratory of Howard Green. The Green lab discovered how epithelial stem cells in the hair follicle as a model system, the Fuchs lab has painstakingly developed a novel technology laboratory of Howard Green. The Green lab discovered how epithelial stem cells in the hair follicle as a model system, the Fuchs lab has painstakingly developed a novel genome (with a synthesized centriole) then inserting the entire synthesized genome (with a synthesized centriole) into a distantly related bacterium that the genome took over, molecule for molecule. In 2010, this labor-intensive effort yielded what Venter described as the first human-made species.

We’re All Different and We’re Not Alone
Venter told the Annual Meeting audience that his institute’s advances in rapid sequencing revealed many of our earlier views of genomics to be simplistic. The first human genome sequenced was a haploid conglomerate of four individuals (including Venter), and the common wisdom at the time was that we, humans, would all have a mostly common sequence with only a few variants. This is not accurate, said Venter. As the sequencing price has fallen and the number of individual sequenced genomes piles up, it’s become clear that every one of us has in our own genomes a significant number of non-synonymous substitutions. The first diploid genome to be sequenced, in 2007, was Venter’s own, and it showed significant variation within a single human. We are all “compound heterozygotes,” Venter declared. By sequencing individual sperm, Venter’s lab found an average of one crossover sequence per cell and the same holds true for eggs. Increasingly, said Venter, the question has become, what is a normal human phenotype? Nor are we alone in our genomes and our bodies, according to Venter. Shotgun sequencing of the human gut biome shows that while we all have roughly 100 trillion human cells, we are also joined by 200 trillion bacteria. For all we have 20,000 or so human genes, we also live with 10 million microbial genes. Our resident microflora affects us, Venter said, pointing to new studies linking the composition of the microbiome to diseases such as obesity and diabetes. Beyond the biome, said Venter, is the human metabolome, which is the mix of all chemicals circulating in your blood. Human cells can produce about 2,400 different chemical compounds, but studies have shown that about 500 compounds are circulating at any one time. The bacterial residents of our microbiome churn out a key portion of the metabolome. Analysis of these compounds has shown that about 60% are of human origin and 40% can be traced to the plants and animals in our diet, but 10%, or 50 chemicals, are of bacterial origin.

Life Forms by Email
Beyond the crowded human genome, Venter took the audience into outer space with an explanation of his Digital Biological Converter (DBC), a bio-robot that would be able to...
sequence species in far away places and email the digitized results for transformation by a kind of DNA printer. Venter’s lab has been testing a DBC prototype system in a suitably remote location, the Mojave Desert, where researchers have been sampling lichen growing under quartz rocks and sending the digitized sequences back to San Diego for re-creation. Venter’s ultimate test would put a DBC robot on Mars with a deep soil probe to recover Martian life forms from the permafrost or deep water deposits, sequence them, and transmit the still digitized genome within minutes to Earth, where high-level biosafety labs could print the alien life forms.

Sequencing on Mars or using the epidermal surface of a mouse embryo as a genetic Petri dish—none of this was on the agenda in 2001 when Venter and Fuchs last spoke to ASCB. In her talk, Fuchs pointed out that it was nearly a century from Ernest Haeckel’s introduction of the term “stem cell” to Howard Green’s first successful culture of adult stem cells, but it took only seven years from that to Gail Martin’s cultivating of embryonic stem cells by Shinya Yamanaka in 2007 that picked up the pace yet again. But Fuchs reassured her audience of young scientists, “There is still a lot of exciting science left to do.”

—John Fleischman

“...there is still a lot of exciting science left to do.”

Nobel Winners Speak of Science, Funding, and Impact Factors

James Rothman

Winners of the 2013 Nobel Prize in Medicine or Physiology and ASCB stalwarts Randy Schekman and James Rothman brought some of their laureate magic to New Orleans December 16 when they addressed a special plenary session supported by Sanofi at the ASCB Annual Meeting. The talks had been billed as direct from Stockholm even though the exigencies of modern airline routing gave both Schekman of the University of California, Berkeley, and Rothman of Yale a chance to metaphorically change their shoes at home before heading to Louisiana. Their joint ASCB Annual Meeting appearance, however, was their first scientific stop since Nobel Week.

The actual talks that Schekman and Rothman delivered to the large crowd gathered in the Great Hall closely followed the Nobel Lectures that they had delivered in Stockholm at the Karolinska Institutet on December 7, three days before they received their Nobel medals from the King of Sweden. As they had done in Sweden, both Schekman and Rothman skilfully dissected the roots and branches of vesicle transport. Schekman started the modern story of vesicle transport with George Palade, himself a Nobel laureate in 1974 (and a founder and former president of the ASCB), who first visualized the process by which proteins were synthesized in the rough endoplasmic reticulum and sorted by the Golgi for export from the cell. But to resolve the question of how cell cargoes were assembled, delivered with such precision, and unpacked for secretion required a radically new approach. Schekman gambled that yeast genetics would allow the refinement of light on these processes. Over the years, that approach paid off as the Schekman lab generated a vast library of yeast mutants that could form, coat, uncoat, deliver, and open vesicles. From there, Rothman introduced the cast of characters—NEM, NSF, and SNAP, all of which led to SNARE, the SNAP receptor and the “SNARE pin,” the harpin-shaped molecular switch that drives vesicle and membrane together with speed and force.

The Nobels also provide winners with a bully pulpit and both laureates were making use of it. In his New Orleans talk, Rothman was more pointed than in Stockholm in criticizing what he called the “crushing” of basic research in the United States. Rothman reiterated his prediction that if the budget cuts on basic research continue for another 5–10 years, a whole generation of American scientists will be forced overseas to do research. Rothman specifically called out the National Institutes of Health for its “misallocation” of research grant money, which in Rothman’s view has favored translational research at the expense of the kind of basic research that led Rothman to the 2013 Nobel Prize.

Earlier in the week, Schekman stirred up a ruckus on the news and social media with an opinion column in the British newspaper The Guardian that criticized the influence of journal impact factors (JIFs) in scientific publishing and denounced what he called “luxury” journals—Science, Nature, and Cell—for using JIFs in their self-promotions. Schekman said these journals have become “luxury goods in Rothman’s view has favored translational research at the expense of the kind of basic research that led Rothman to the 2013 Nobel Prize.

Scientists are famously wary of allowing emotion to overwhelm their analytic skills, but the vast crowd that filled the Great Hall in the convention center was plainly thrilled at the thought of two of their own being celebrated around the world. Scientific heroes are usually safely buried in textbooks, but there at the 2013 ASCB Annual Meeting were two very alive examples of the intellectual power that drives discovery and, through basic discovery, drives the world.

—John Fleischman

Randy Schekman

Americans who also won the Nobel Prize for their work in cell biology. Rothman benefited from their support and guidance in the early 1980s when he set out to reconstruct vesicle transport in a cell-free extract system to identify the key players that could form, coat, uncoat, deliver, and open vesicles. From there, Rothman introduced the cast of characters—NEM, NSF, and SNAP, all of which led to SNARE, the SNAP receptor and the “SNARE pin,” the harpin-shaped molecular switch that drives vesicle and membrane together with speed and force.

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—John Fleischman
The Modest Eukaryote Steps Out in John Pringle’s E.B. Wilson Lecture

In nominating John Pringle for the E.B. Wilson Medal, the ASCB’s highest scientific honor, Daniel Lew, a former Pringle postdoc now at the Duke University Medical Center, described his one-time PI as the “father” of yeast cell biology. David Drubin, who introduced Pringle’s E.B. Wilson lecture at the ASCB Annual Meeting in New Orleans, took it further. “Today it’s hard to appreciate that back in the ’70s and ’80s, a lot of cell biologists didn’t accept yeast as a eukaryotic cell,” explained Drubin, a leading yeast biologist at the University of California, Berkeley. “In fact, the common view at the time was that yeast was simply a very ambitious prokaryote.” Pringle’s 40 years of pioneering work on cell polarity, cell division, and the septin cytoskeleton made yeast a premiere organism for studies of cell biology, said Drubin, adding, “Now thanks to John, we know that yeast are not ambitious prokaryotes but very modest eukaryotes.”

Modest or no, the star of Pringle’s Wilson lecture was Saccharomyces cerevisiae. (Pringle’s complete 2013 E.B. Wilson lecture is at: www.ascb.org/2013-annual-meeting-videos?&start=4). Pringle paid tribute to family, lab members, colleagues, mentors, and the National Institute of General Medical Sciences, but it was the humble baker’s yeast with its genetic possibilities and deep mysteries that attracted Pringle to the University of Washington in 1970 as Leland Hartwell’s first postdoc. Working with baker’s yeast, the Hartwell lab identified the family of cell division cycle (cdc) genes that led to Hartwell’s 2001 Nobel Prize in Physiology or Medicine. Yeast took Pringle on his academic journey with stops at the University of Michigan, the University of North Carolina, Chapel Hill, and finally Stanford. Along the way, the Pringle lab used yeast to establish many of the principles of cell biology, suggested Drubin, adding, “Now thanks to John, we know that yeast are not ambitious prokaryotes but very modest eukaryotes.”

“It’s been quite a journey,” Pringle told his ASCB audience, “that involved a lot of people, but it was a lot of fun.” Every step, Pringle stressed, was “curiosity-driven” basic research. “The fact that it has general and medical relevance (today) shouldn’t be surprising to anyone in this room even if curiosity-driven research is not such a hot commodity these days for funding by the government or foundations.” —John Fleischman

ASCB Award Essays

Read essays by John Pringle and other 2013 ASCB award recipients in the November 1, 2013, issue of Molecular Biology of the Cell (www.molbiolcell.org/content/24/21.toc).

Look for More 2013 Annual Meeting Coverage in the March Issue of the Newsletter

Council Meeting

The ASCB Council met in New Orleans for important discussions about the future of the Society. For a detailed discussion, look for the Executive Director Stefano Bertuzzi’s column in the March issue.

DORA Panel Discussion

Molecular Biology of the Cell Editor-in-Chief David Drubin led a panel discussion on the San Francisco Declaration on Research Assessment (DORA). Learn about progress and possible future directions for this important initiative.

Reports by British and French Young Cell Biologists

ASCB Honors Jeremy Berg for Advocacy Work

Jeremy Berg became director of the National Institute of General Medical Sciences (NIGMS) just in time to see the end of the doubling of the National Institutes of Health (NIH) budget and the beginning of a steady decline in funding for the agency. However, as 2013 ASCB President Don Cleveland said in his remarks at the Public Service Award ceremony, we could not have had a better person at the helm of the institute that provides a majority of our community’s funding during the subsequent eight years of decline.

In selecting Berg for the award, the ASCB Public Policy Committee recognized “his work as a strong and vocal advocate of basic research” and honored him “for his outspoken support of the basic research community.”

Unlike previous recipients of the Public Service Award, Berg included both science and policy in his remarks. Along with talking about the work he did at NIGMS, he also discussed his research before and after leading NIGMS. Berg was among the first to design zinc-fingers to target specific DNA sequences, a strategy that has since been built upon to generate zinc-finger nuclease genome editing technology. His more recent work at the University of Pittsburgh has focused on understanding the structural basis for targeting to peroxisomes, organelles responsible for the breakdown of long-chain fatty acids.

During his presentation, Berg told a story that shows what it means to be an advocate. Each fall during his tenure as NIGMS director, Berg and his staff would put their heads together to speculate about who might be selected by the Nobel committees that year. Each year, they would gather information about the how NIGMS had been involved in the careers of the potential winners and share that information with reporters so they would be aware of the important role NIH and NIGMS played in the careers of the potential Nobel laureates.

In 2013, Berg knew that, with the government shut down, no one at the NIH would be able to get the NIH’s story out to reporters. So even though he was no longer at the NIH, Berg took it upon himself to gather information about NIH involvement in the careers of potential laureates and have it ready for any reporter who came calling. —Kevin Wilson

View Videos and TV Spots from the 2013 Annual Meeting

To view videos, go to http://www.ascb.org/2013-annual-meeting-videos
A Special Invitation for ASCB Attendees

Journal of Histochemistry & Cytochemistry invites ASCB’s meeting attendees to submit their manuscripts to JHC and upon acceptance, JHC will waive the $450 article processing fee.

JHC Author Benefits
- No charge for color figures
- Liberal article length
- Generous number of figures
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http://hermes.mbl.edu/education/courses/special_topics/jhcm.html

ANNUAL MEETING Highlights

Education and Training

2013 Education Committee
Susan M. Wick,* Chair
Meri Lynn Casem
Thea Clarke*
Martha S. Cyvert
Lena Diaw
Erin Dolan,* ex officio
Karen E. Kalumuck
Caroline Kante*
Anthony J. Koleske*
George E. Plopper, Jr.*
Omar A. Quintero*
Cheston A. Saunders
Kath T. Schneider*
William Wallace
Michael J. Wolyniak*
Kellyann Jones*

Education Committee Associates
Edward Cluett*
Megan Dobro*
Joyce Fernandes*
Tracie Gibson*
Jennifer Hood-DeGrenier*
Irina Makarevich*
Amy Pruniške*

*In attendance at December meeting

Education Committee Plans Mentoring Teaching Initiatives

At its meeting in New Orleans, the Education Committee focused on new initiatives in the realm of mentoring teachers.

One such initiative was already in place at the Annual Meeting, Building on the success of the Committee’s online and onsite CV review programs, a small cadre of volunteers met one-on-one with mentees interested in improving their teaching practices and instructional skills in such areas as team-based learning, backwards design, effective use of clickers, active learning strategies, and flipped classrooms. The mentors and mentees will continue to work together in 2014 to help the mentees establish or improve some particular aspect of evidence-based, student-centered learning in their classrooms.

In addition, the ASCB Council approved the Committee’s request for funds for an Education Mentoring Fellowship program in 2014. This will allow members of ASCB to apply for travel grants to visit a mentor to experience first-hand innovations, receive coaching, and develop and test their own new classroom materials. In line with the AAAS Vision and Change recommendations, this program will help develop a community of support for educators.

Besides discussing initial planning steps for both programs mentioned above, the Committee members conducted brief evaluations of 2013 education programs as well as talked about ideas for education programs at the next Annual Meeting in Philadelphia.

—Thea Clarke

Foundational Cell Biology Workshop Inspires Participants

The 2013 Annual Meeting featured the inaugural Foundational Cell Biology Workshop, with the title "Making Cell Biology Accessible to All.” This new workshop took the place of the K–12 Education Workshop held in years past and aimed to draw together meeting attendees interested in getting students excited about basic cell biology concepts at a range of educational levels, from K–12 to undergraduate non-majors and majors.

The workshop began with short presentations from a panel of four educators who described their approaches to making basic cell biology content engaging, accessible, and authentic. The panelists discussed:

- A semester-long inquiry-based lab series involving a metabolic pathway in yeast
- Service learning activities in which students refine their own knowledge by creating and implementing teaching activities for middle-school students
- Creative ways to use Internet resources in classroom assignments
- How to identify and reinforce the core concepts of cell biology

Some of the information presented by the panelists is contained in PowerPoint presentations available at http://www.ascb.org/bioeducate.)

The panelists’ presentations triggered a lively question-and-answer session, which was followed by equally engaging breakout discussions facilitated by workshop organizers, panelists, and other invited table leaders. Two
of these small-group discussions continued
the conversation initiated by the panel
regarding educational outreach/service
learning and successful use of Web resources and
interactive technology. Others explored creative, interdisciplinary non-major and
“gateway” courses, promoting active learning
using either the flipped classroom or case study
approach, and ideas for low-budget investigative labs.

Workshop attendees included high school
teachers, undergraduate and graduate
students, postdocs, and undergraduate
educators. Participants and organizers
engaged in a very fruitful exchange of ideas, and
most left inspired to put those ideas to practical use in their own teaching. In sum, the
Foundation Cell Biology Workshop made a successful debut.

—Jennifer Hood-DeGrenier, Worcester State
University

Education Initiative Forum: Teaching How Scientists Think
What kinds of decisions do scientists have to make when solving research problems?
How do they prioritize which tests to run or experiments to do in view of how much
testing costs or how long it takes to do a particular experiment? When does it become
necessary to call upon experts in other fields
that do not grapple with the puzzling evidence and facing the constraints under which the scientists were
working. In addition, the activity improves their objective attitudes toward biology as determined
by a 10-question modified CLASS-Bio survey. Students took immediately before and following
the activity. Taking about 75 minutes of class
time, this activity works in large lecture halls as well as in smaller settings.

—Sue Wick, University of Minnesota-Twin Cities

Education Initiative Forum: Retaining Students

What do you do when you are dissatisfied
with student learning? Nathan Collie of
Texas Tech University challenged Education Initiative Forum attendees to think about that
question. In his presentation entitled “Engaging and Retaining Upper Division STEM
Undergraduates in Large Cell Biology Classes,” he presented concrete ideas about how to deal
with a question many biology educators ponder.

Collie described approaches he developed
to address differences in the success rate in the
cell biology course between transfer students and students matriculating through Texas Tech

University. He recommends that instructors:

■ Set the tone for the class
■ Create an interactive environment
■ Create a high-end activity

Collie sets the tone in his cell biology courses
on the first day with the video The Inner Life of
the Cell. He creates an interactive environment
by using a team-based learning strategy in which
team projects are used to promote student
learning and reading beyond the textbook.
In addition to team-based assignments, some
techniques Collie uses to engage students include assigning poster presentations, using
warm-up exercises to encourage students to review material in upcoming lectures, and using
clickers to encourage student participation in answering in-class multiple-choice questions.
The session was electric. In his presentation,
Collie employed some of the key ideas he was
describing, and audience members were very
involved and asked questions throughout the
session. It was evident to all that Collie is
passionate about teaching.

—Thea Clarke

ASCB Commends Undergraduate
Poster Competition Winners

By all accounts, it was another successful poster
competition for undergraduate students want-
ting to practice discussing their research before
the main event in the Exhibit Hall. The
Undergraduate Poster Competition was orga-
nized by the ASCB Education Committee and
Minorities Affairs Committee (MAC).
Congratulations to this year’s undergraduate
winners: Yves Adamian, California State
University, Northridge (first place, $500); Brianna Pierce, Kansas State University (second
place, $300); Brianna Manes, Pepperdine
University (tie for third place, $50); Phil
Nguyen, Lafayette College (tie third place,
$50); and Yoo Jung Kim, Dartmouth College
(fourth place; no photo available). Please see
page 33 for winners of the MAC prizes.

Thanks to all who participated, especially to
those who volunteered to be judges.

—Thea Clarke

Ramos Urges Undergraduates to
Become “Producers of Knowledge”

Daniel Colón Ramos, associate professor of cell
biology at the Yale School of Medicine, started
the Undergraduate Program by introducing the
young scientists in the room to three scientists
who he helped to create. These are not his
graduate students; they are his three-year-old
triplets. He used his daughters’ endless capacity
for exploitation to illustrate that we are all born
scientists.

What we as scientists learn about
the natural world is broadly applicable outside the
context in which it was discovered. When we

Daniel Colón Ramos at the Undergraduate Program

2013 Undergraduate Poster Winners

Yves Adamian
Brianna Pierce
Brianna Manes
Phil Nguyen

ASCB NEWSLETTER JANUARY/FEBRUARY 2014 JANUARY/FEBRUARY 2014 ASCB NEWSLETTER
biology approaches in Caenorhabditis elegans to unravel the establishment of neuronal architecture. Although these studies are within the context of a nematode, the findings are broadly applicable to understanding animal neurocircuitry, including that of humans, because of evolutionary conservation.

Ramos concluded his presentation by emphasizing that a knowledge-based economy requires science literacy, and that it is the responsibility of all scientists to share their knowledge with society. He told the audience of his work establishing CienciaPR.org, an online community of people with interests in science (“ciencia” is Spanish for science) and Puerto Rico, his homeland. He hopes that through this social network that supports science literacy, current and future scientists will continue to find excitement in the exploration of our natural world.

—Omar A. Quintero, University of Richmond

Deborah Allen Receives Alberts Award

Deborah Allen of the University of Delaware, a pioneer in problem-based learning, received the 2013 Bruce Alberts Award for Excellence in Science Education at the ASCB Annual Meeting in New Orleans. The award was presented to honor Allen’s significant and sustained contributions to biology education at the K–12, undergraduate, and graduate level for more than two decades.

The author of two books on problem-based learning—Thinking Towards Solutions: Problem-Based Learning Activities for General Biology and The Power of Problem-Based Learning—Allen has been influential in supporting biology dissemination that knowledge to others, society benefits because the community of science is the community of humanity. To illustrate this point, Ramos noted the “golden age of science” in which we have been living for the past century has had a dramatic global impact, particularly on life expectancy. Basic science discoveries, which are often made in model organisms, have laid the groundwork for improvements in medicine and human health.

To become contributing members of the global community of scientists, undergraduates will have to transition from consumers of knowledge to producers of it. In much of their previous experience with science, students have been learning what other scientists have done. As they pursue graduate degrees and become pioneers at the frontier of human knowledge, students’ perspective on the pace of discovery is going to change considerably. Ramos illustrated this point by noting that although a catchy pop song can be experienced quickly and might stick with us forever, creation of such a tune takes far more time than it takes to listen to it. In the same way, creating new knowledge takes more time and effort than experiencing knowledge created by others.

This shift in roles from consumers of knowledge to producers of knowledge will require young scientists to gain new skills. Ramos identified some factors that are important for that transition—good mentors to help build the required skills, the ability to manage time effectively, and a passion for one’s work. With his own graduate mentor, Sally Kornbluth, in the audience, Ramos spoke of how each of those factors contributed to his success. As a neuroscientist he uses systems cell ANNUAL MEETING Highlights

Tyrone Hayes spoke at the High School program

Deborah Allen receiving the Bruce Alberts Award

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educators in integrating problem-based learning into undergraduate biology courses both domestically and internationally, especially in Peru where she was a Fulbright Scholar. In addition, Allen has co-authored more than 20 of the widely read Approaches to Biology Teaching and Learning features in CBE—Life Sciences Education, which have been collected in her third book, Transformations: Approaches to College Science Teaching.

Allen’s presentation engaged the audience in a historical reflection on her career, which began as a new assistant professor struggling to engage her undergraduate students and continued through her work with K–12 science teachers to her more recent policy efforts as a program officer in the Division of Undergraduate Education at the National Science Foundation. Allen is currently the Director of the University of Delaware’s Center for Educational Effectiveness. Congratulations to her on this well-deserved award!

—Kimberly D. Tanner, San Francisco State University

**Education Minisymposium: Retaining Diverse Undergraduate Students in the Biological Sciences**

Speakers at the Education Minisymposium on Sunday, December 15, discussed programs at their institutions that work toward addressing the significant underrepresentation of African Americans, Latin Americans, and Native Americans in science, technology, engineering, and mathematics (STEM) disciplines.

Many of these programs emphasize the high-impact practice of exposing undergraduates to research. A program at the University of Minnesota has received National Institutes of Health funding (e.g., from the Minority Access to Research Careers program and the Initiative for Maximizing Student Development) and has focused on inclusion of Native Americans. Speakers emphasized the importance of nurturing intellectual growth, providing social support, and developing academic and professional skills prior to immersing a student in a research lab. Through an initiative funded by the Howard Hughes Medical Institute at the University of Richmond, prospective STEM majors go through a pre-freshman summer program followed by a series of courses that focus on quantitative and interdisciplinary skills, which form the foundation for subsequent research experiences and course options. An important component of this program is the availability of academic and professional mentoring throughout the undergraduate career. Placing students in learning communities is another high-impact practice that has been used...
ANNUAL MEETING Highlights

“One thing that ASCB does very well is to have events that cover lots of different topics and interests. In addition to the excellent science, I had the opportunity to meet and network with people who are working at primarily undergraduate institutions. . . . As a new faculty member, this experience was invaluable.”
—Lindsay Lewellyn, Assistant Professor, Butler University

COMPASS Events at the Annual Meeting

Buddy Program

We all know how frightening it can be to attend a conference for the first time. This is the time when scientists promote their work and start building connections. However, approaching senior scientists can be intimidating for first-timers. The Committee for Postdocs and Students (COMPASS) therefore helped first-time attendees in “breaking the ice” by offering them a casual environment in which to meet experienced scientists. To do this, the Committee created the Buddy Program and asked established ASCB Annual Meeting attendees to meet with first-timer “buddies” and share their advice on how to get the best from a conference. An overwhelming number of enthusiastic first-timers applied. Mentors enjoyed the opportunity to connect with these energetic new ASCB members. COMPASS hopes that next year more mentors will volunteer so the program can be expanded.

Career Development

One of the main goals of COMPASS is to help trainees in science with career development. At the meeting, COMPASS held a number of events to promote professional development:
• COMPASS members facilitated career panels that focused on research in industry, parent law/intellectual property, business management, science policy, and science education.
• The Committee invited exhibitors to talk to attendees in the Career Center about their jobs, and many vendors joined attendees in a networking happy hour held in the Career Center.
• Representatives from Science magazine presented their “Individual Development Plan,” an online program that helps PhDs examine their skills, interests, and values to help them choose a career.
• Toby Freedman, author of Career Opportunities in Biotechnology and Drug Development, was booked solid for one-on-one career coaching.
• A number of PI's took the time to help with one-on-one CV review.
• COMPASS teamed up with the Women in Cell Biology Committee to produce this year's mentoring theater on interviewing.
• Joanne Kamens, executive director of Addgene, held a talk on management skills in the Career Center, a well-attended, standing-room-only event.

ePosters

An exciting addition to the Annual Meeting this year was the inclusion of nine ePoster sessions, all of which were chaired by COMPASS members. These innovative presentations, each a combination poster and short talk, allowed researchers to highlight their multimedia content, a must for today's cell biology research. Further, the informal setting facilitated active discussions, especially among young scientists.

The feedback received from the ePoster sessions was extremely positive, and judging from their popularity at the meeting, we will be seeing more ePosters in the future. Want to learn how to make an ePoster? Check out the how-to on the COMPASS Blog: www.ascb.org/prezi-eposter.

Open Forum

COMPASS subcommittee co-chairs and other representatives staffed tables for informal, face-to-face discussions with ASCB's student and postdoc members. They heard your views on career development programs, improving the ASCB website, ideas for outreach, and ways to keep ASCB members connected.

Plans for the Future

In the midst of current debates about publication models, evaluating impact, distributing funding, and addressing reproducibility, postdocs and graduate students are the future of the scientific enterprise and stewards of cultural change. However, their needs and interests sometimes go unheeded. COMPASS seeks to take steps to remedy this problem through the creation of the Data Collection and Analysis subcommittee, which will survey trainee members of the ASCB to understand how the Society can better serve their needs. Armed with this information, COMPASS and ASCB as a whole can work to influence policy at multiple levels.

New COMPASS initiatives in 2014 will include awards to facilitate local outreach efforts and prizes for comics, videos, and/or short stories that communicate science.

—Members of COMPASS

The Buddy Program matches first-timers to experienced ASCB members for the first time at the Meet and Great Happy Hour before the Keynotes.

ASCB Kakauza Prize winner Tina Han, flanked by ASCB President (left) Don Cleveland and Mario Koksch of Beckman Coulter, which sponsors the $5,000 ASCB Kakauza Prize winner Tina Han, flanked by ASCB President (left) Don Cleveland and Mario Koksch of Beckman Coulter, which sponsors the $5,000 ASCB Kakauza Prize winner Tina Han, flanked by ASCB President (left) Don Cleveland and Mario Koksch of Beckman Coulter, which sponsors the $5,000 ASCB Kakauza Prize winner Tina Han, flanked by ASCB President (left) Don Cleveland and Mario Koksch of Beckman Coulter, which sponsors the $5,000

COMPASS member Laura Diaz-Martinez talked to students and postdocs about the COMPASS Communications Subcommittee at the Open Forum.

The 2013 ePoster presentations were a huge hit.
Molecular Biology of the Cell

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International Affairs

International Affairs Committee Partners with Other Societies, Recruits Associates to Expand Initiatives

Led by Chair Judith Kimble, the International Affairs Committee (IAC) met in New Orleans and discussed the relationship between its activities and objectives. IAC was able to expand its initiatives in targeted countries by partnering with other scientific societies, both in the United States and around the world, and recruiting and engaging IAC Associates to assist committee members. Five of those Associates attended the December IAC meetings in New Orleans, and another 25 Associates have participated in IAC conference calls, email discussions, and workshops held around the world.

In a discussion led by Kimble at the December meeting, IAC members reviewed accomplishments of the Committee:

- A cell biology workshop was held in Ghana
- A microscopy workshop was held in Turkey
- A joint meeting with ASCB and the International Federation for Cell Biology (IFCB) is confirmed for 2014 in Philadelphia
- Plans are underway for the Asian Pacific Organization of Cell Biology (APOCB) Congress and ASCB workshop in Singapore in February 2014
- IAC collaborated with the Public Policy Committee on the U.S. Immigration Policy position paper
- There was record participation in, and enthusiasm for, the IAC Roundtable, the Research & Training Exchange Fair, and the International Sessions held at the 2013 Annual Meeting

Four new IAC events were held at the 2013 Annual Meeting: Cell Biology in France; Career Track Options in Germany; an EMBO session, Research Assessment—Is Peer Review Under Threat?; and a European Research Council session, Funding Opportunities in Europe for Creative Minds from Anywhere in the World

Representatives from Germany, China, France, the European Research Council, Brazil, and India hosted booths in the Exhibit Hall to introduce attendees to research, training, and other opportunities in their respective countries and organizations.

Kimble presented her objectives for the future of IAC:

- Collaborating with the Women in Cell Biology Committee on a workshop on Challenges Facing Women in International Scientific Communities for the 2014 Annual Meeting
- Redesigning the ASCB website to better address international members’ needs
- Exploring new avenues for international scientific exchange
- Supporting IAC’s current educational missions and seeking new ones
- Partnering with international cell biology societies
- Collaborating with other committees to write position papers that outline recommendations for U.S. and international policy

IAC Associates

Abel Alazar-Roman
Luiz-Claudio Cameron
Maria Jimenez
Selvi Corey
Lina Dagnino
Philip Dash
Michael Dores
Deborah Glaser
Gihan Hida
Eric Hwang
Maria Ines
Hideko Kaji
Sophie Lelièvre
Dorothy Leti
Boatema Oforn-Frimpong
Guanghao Ou
Noorin Reza
Jayanthi Repalli
Rania Rizk
V. Kenyi Sato-Diaz
Victoria Schalman
Marina Segal
Arpita Sen
Sweeta Suresh
Sara Suresh
Justin Taraska

*In attendance at December meeting

ANNUAL MEETING Highlights

IAC Roundtable

The International Sessions held at the 2013 Annual Meeting:

- Scientific Communities for the 2014 Annual Meeting
- Research & Training Exchange Fair, and enthusiasm for, the IAC Roundtable, the Research & Training Exchange Fair, and the International Sessions held at the 2013

Twenty-six countries participated in the IAC International Exchange Fair.

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- Fair, constructive, rapid peer review
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  - Retrospectives
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Jayanthi Repalli
Rania Rizk
V. Kenyi Sato-Diaz
Victoria Schalman
Marina Segal
Arpita Sen
Sweeta Suresh
Sara Suresh
Justin Taraska

*In attendance at December meeting

27
Thirty-one Countries and Organizations Attend International Research & Training Exchange Fair

The ASCB is a great venue for highlighting science in general, and cell biology in particular, in an increasingly international community. For the past four years the ASCB International Affairs Committee (IAC) has organized an International Research & Training Exchange Fair to serve as a platform for the exchange and exhibition of scientific activities in various countries around the world.

This year a very successful Fair, with representatives from 31 countries and organizations, was held during the Opening Reception that immediately followed the Keynote Symposium. Representatives were available to talk with people interested in learning more about doctoral, postdoctoral, visiting scientist, and permanent academic positions in their countries. Reports from these countries included information on the current status of the scientific communities and listed websites for accessing information.

Keynote Symposium. Representatives were included graduate students and postdocs from around the globe, traveling from Austria, Australia, Canada, Chile, France, Finland, Germany, Israel, Ireland, India, Japan, Mexico, Norway, the Netherlands, Portugal, South Korea, South Africa, Switzerland, Singapore, Scotland, Taiwan, and the United Kingdom. U.S. participants with international interests were also there.

To kick off the event, Roundtable co-chairs Judith Kimble and Yixian Zheng welcomed all and gave a few minutes introduction to IAC activities. Then participants ate box lunches and discussed key issues. For example, what emerging scientific topics do you think should be included in the ASCB’s Annual Meetings and journals? And how can ASCB better serve its international members? ASCB leaders serving as table moderators included past, present, and future Society presidents as well as Council members and committee chairs.

The room was humming with energy and ideas. The Roundtable’s informal atmosphere generated many creative ideas, which were collated for the ASCB leadership to consider during the coming year. But perhaps most important were the many connections made between strangers from distant lands, crossing language and cultural barriers to learn about each other and make friends.

—Judith Kimble, Chair, International Affairs Committee

IAC Roundtable Hum with Energy and Ideas

The International Affairs Committee (IAC) Roundtable was held Saturday, December 14, 2013, at the ASCB Annual Meeting in historic New Orleans. Nearly 200 people came to the event despite competing attractions such as the French Quarter. Attendees included graduate students and postdocs from around the globe, traveling from Austria, Australia, Canada, Chile, France, Finland, Germany, Israel, Ireland, India, Japan, Mexico, Norway, the Netherlands, Portugal, South Korea, South Africa, Switzerland, Singapore, Scotland, Taiwan, and the United Kingdom. U.S. participants with international interests were also there.

The International Affairs Committee (IAC) Roundtable Hums with Energy and Ideas

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—Judith Kimble, Chair, International Affairs Committee
ANNUAL MEETING Highlights

Membership Committee Focuses on ASCB Members’ Needs and Interests, Plans Improved Service

The Membership Committee’s discussions at its meeting in New Orleans focused on how better to determine the needs of ASCB’s members, and potential members, and how best to convey the message of what ASCB has to offer them.

Led by ASCB Secretary Kathleen Green and Executive Director Stefano Bertuzzi, current and incoming Committee members discussed the need to create a robust membership database that will incorporate the information required to determine members’ specific needs, preferences, and interests. Programs and benefits can then be targeted to meet the needs of individual members. Hashem Dbouk reported that the Committee for Postdocs and Students (COMPASS) has created a new subcommittee for data collection and analysis.

Other items discussed included the need to:
- Improve communication with members in promotion of all ASCB programs through the website, emails, and social media
- Promote ASCB local meetings, for which ASCB provides funding to postdoc and graduate student organizers, and use these meetings as vehicles for member recruitment
- Expand ASCB abroad and reach out to international members

Green noted that the Committee looks forward to working closely with COMPASS in 2014 in making the Society an integral, vital part of the future of our scientific community.

—Katherine Hempel, Membership Manager

2013 Membership Committee
Kathleen J. Green,* Chair
Stefano Bertuzzi,* ex officio
Hashem Dbouk*, COMPASS Liaison
Cynthia Godes*
Katherine Hempel
Angela Hess
Andrew Heiland*
Geri Kreitzer*
Guangpu Li*
Mike McCormack*
Anthony Moss*
Zu-Hang Sheng*, Member-Elect
Kandice Tanner
Alissa Weaver,* Member-Elect

*M in attendance at December meeting

ANNUAL MEETING Highlights

Membership Committee meeting

Membership Committee meeting

MBoC Editorial Board meeting

MBoC Editor-in-Chief David Shulkin

 Membership Committee meeting

As an international student, I have found it difficult to obtain funding to attend research events and programs on a national scale. This ASCB travel award enabled me to participate in my first national research conference, where I won first place in the Minorities Affairs Committee poster competition. This award gave me the opportunity to contribute to the scientific community while learning from others. For the entire experience, I am greatly appreciative.

—Jessica Ricketts, Barry University

“The travel award made it possible for me (and my student) to attend the meeting, since I don’t have access to enough funds to go without such assistance. This meant my student could present her work (and get a sense of what graduate school might be like) and that I could connect with colleagues in my field but also learn about cutting edge work in cell biology to update my course lectures. The ASCB Annual Meeting offers a lot to all attendees; it is like getting multiple meetings in one! Thank you for the opportunity to attend.”

—Amy Springer, Faculty, Siena College

W. Mark Leader

Drubin listed other positive aspects of MBoC that can be used as talking points when promoting the journal:
- Accepted articles are online within two weeks.
- It has a distinguished Editorial Board.
- It is the ASCB’s science journal, and revenues from MBoC are put to use for the ASCB’s great programs.
- It is peer edited.

—W. Mark Leader

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Andrew Heiland*
Geri Kreitzer*
Guangpu Li*
Mike McCormack*
Anthony Moss*
Zu-Hang Sheng*, Member-Elect
Kandice Tanner
Alissa Weaver,* Member-Elect

*M in attendance at December meeting

an opt-out basis, which helps assure authors that MBoC is a venue in which their work will be seen.

But like many society journals, MBoC has experienced a decline in submissions and, for the second year in a row, an unexplained drop in its journal impact factor. It is unclear whether these two changes are related, but the group devoted much time to discussing the San Francisco Declaration on Research Assessment and its efforts to end the deleterious effects of journal impact factors on scientific research and scientific publishing.

The group discussed possible enhancements to the review process to make the journal even more attractive to authors. It also discussed the need to promote MBoC better, particularly the journal’s practice of expediting peer review by considering reviews from another journal if a paper is scientifically sound but has been rejected on the basis of scope or impact. Many authors may not know about this.

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—W. Mark Leader
ANNUAL MEETING Highlights

2013 ASCB Minorities Affairs Committee

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David J. Asai*
David R. Burgess,* MARC Grant PI
Andrew G. Campbell,* Vice Chair
Franklin A. Carrero-
Martinez*
Wilfred E. Denerclaw, Jr.*
Laranya Hammonts-Odie*
Deborah Harmon Hines
Tama W. Hasson*
Michelle Juarez*
Michael J. Leibowitz*
Renato McCall*
Sandra A. Murray*
Deborah McCall*
Latanya Hammonds-Odie*
Wilfred F. Denetclaw, Jr.*
Franklin A. Carrero-
Vice Chair

Minorities Affairs Committee Looks Forward to a Busy Year

Minorities Affairs Committee (MAC) programs and activities at the 2013 ASCB Annual Meeting were quite successful even with less funding than in previous years, noted Chair Renato Aguiler at the 2013 MAC meeting in New Orleans. The MAC distributed 77 travel awards to students, postdocs, and junior faculty who would otherwise not have been able to attend the Annual Meeting. MAC programs are funded by a Minority Access to Research Careers (MARC) grant from the National Institute of General Medical Sciences (NIGMS).

A continuing, major concern of the MAC is funding for its programs. The MAC was recently notified that the MARC grant program under which it has received funding for over 17 years has been discontinued. However, funding is available under other NIGMS grant programs, and the MAC will be submitting new grant proposals in 2014.

Because the MAC has been grappling with funding, MARC Grant PI David Burgess will lead a process of identifying new funding sources and applying for fee grants in 2014. MAC member Michael J. Leibowitz was awarded a National Science Foundation grant in December 2013, and he was commended for this accomplishment during the meeting. This newly funded program seeks to promote grant funding success by junior faculty at minority-serving institutions by matching the junior faculty with funded senior faculty at research-intensive institutions.

During the meeting, the MAC also discussed its ongoing programs. The MAC was excited about its Second Year Visiting Professor Lecture Series, which featured Tiffany Oliver of Spelman College as the speaker. ASCB Executive Director Stefano Bernuzzi attended the meeting and congratulated the MAC for a successful year.

—Deborah McCall, Senior Manager, Minorities Affairs

Inspirational MAC Mentoring Keynote

The MAC’s 2013 Mentoring Keynote was outstanding. Speaker Lovell Jones, retired Distinguished Professor, University of Texas MD Anderson Cancer Center, talked about health disparities and how this issue affects everyone. Jones encouraged attendees to continue throughout their careers—to push to eliminate health disparities in society.

—Deborah McCall, Senior Manager, Minorities Affairs

Undergraduate /Graduate Student Sessions

The MAC sponsored a panel session for undergraduate students entitled, “Getting into Graduate School—The Dos and Don’ts.” This interactive session covered the application process for graduate school. Presenters Tama Hasson, University of California, Los Angeles; Renato Aguiler, University of Texas, El Paso; and Michael Leibowitz, University of California, Davis, shared tips on completing the application, asking for letters of recommendation, and the interview process. This session was packed, and attendees had many questions.

A session for graduate students also sponsored by the MAC was entitled “Challenges 101—How to Get the Most Out of Your Graduate School Experience,” focused on the “soft skills” that make the graduate student experience more likely to be productive and successful. Moderated by Michelle Juarez, City College of New York, panelists included Gregory Adams, Jr., graduate student, Morehouse School of Medicine; Veronica Segarra, postdoc, University of Miami Miller School of Medicine; Tasha Ward, postdoc, Harvard Medical School; and facilitator Natasha Gutierrez, graduate student, Rutgers University, Newark.

—Deborah McCall, Senior Manager, Minorities Affairs

MAC and Education Committee Combined Poster Competition a Success for the Second Year

With more than 110 posters at the combined MAC and Education Committee Poster Session Competition—called the ASCB Poster Competition—presenters, judges, MAC and Education Committee members, MAC Visiting Professors, MAC Linkage Fellows, and others enjoyed extensive interaction and networking. The combined competition had lots of energy. MAC poster winners were notified of their winning status during the annual MAC Awards Luncheon. Winners will receive a cash award and a certificate.

2013 MAC Poster Award Winners

Undergraduates

First Place: Jessica Ricketts, Barry University
Second Place: Diana Partida, Pomona College
Third Place: Peter Rodriguez, Barry University

Graduate Students

First Place: Angel Byrd, Warren Alpert Medical School, Brown University
Second Place: Tionika Moody, Georgia State University
Third Place (Tied): Paulo Caceres, Wayne State University/Henry Ford Hospital
Third Place (Tied): Lilen Uchima, Massachusetts Institute of Technology

ANNUAL MEETING Highlights

Postdoctoral Fellows

First Place: Lilian Kaboeche, Geisel School of Medicine
Second Place: Veronica Segarra, University of Miami Miller School of Medicine
Third Place: Damaris Lorenzo, Duke University/HHMI

MAC Awards Luncheon

The MAC hosted its Annual MAC Awards Luncheon, where poster winners were announced, the previous year’s MAC activities were reviewed, and members of the MAC community and other networks and shared experiences. This year, MAC member Laranya Hammond-Odie organized a “networking activity” where attendees had to get out of their seats and meet people who matched specific descriptions. MAC travel awardee Brittany Hannible, Winston Salem State University, met the most people and won a book. More than 125 people attended this annual luncheon event, supported by the Burroughs Welcome Fund.

—Deborah McCall, Senior Manager, Minorities Affairs

“I’m grateful that my MAC trip was funded because my research wouldn’t be where it is today.”

—Deborah McCall, Senior Manager, Minorities Affairs
ANNUAL MEETING Highlights

Educational Resources/MAC Booth and MAC Welcome Suite

Again in 2013, the Educational Resources/MAC Booth—always busy with networking, presentations, and information dissemination—served as the official hangout for the MAC community. All MAC travel awardees must be at the booth for at least one hour during the Annual Meeting. Many stay much longer and come back day after day. Again in 2013, table talks—informal sessions for different audiences—were held at the booth. The sessions are very popular, with one drawing over 70 attendees for the second year. This year the booth was in the ASCB Exhibit Hall, which encouraged more traffic. The MAC Welcome Suite was also popular. This event, supported by the Burroughs Wellcome Fund and held for two days during the Annual Meeting, has become a favorite of the MAC community. In its sixth year and hosted by MAC Chair Renato Aguilera, the MAC Welcome Suite caters to an overflowing crowd and is the venue for much networking and sharing.

—Deborah McCall, Senior Manager, Educational Resources/MAC Booth

E.E. Just Lecture

The 2013 E.E. Just Lecture, “What Are the Chances: The Highly Unorthodox Evolutionary Trajectory of HIV and AIDS, from Monkeys to Apes to Humans to Mice?” was presented by J. Victor Garcia-Martinez of the Center for AIDS Research/Division of Infectious Diseases, University of North Carolina School of Medicine.

The world has changed in the 35 years since HIV was identified as the causative agent of AIDS, but the potential consequences of “risky behaviors” still elude the young. I teach a course in HIV and AIDS for non-science majors at a four-year public college. The students are primarily first-year undergraduates who were born in the mid-1990s. The low level of knowledge this age group has about HIV transmission can be disturbing given that in the United States young adults are one of the populations most at risk for contracting HIV.

Garcia-Martinez’s lecture gave me insight into the more recent advances in research to combat HIV in the context of the current worldwide pandemic.

Garcia-Martinez has been working to understand the cellular and molecular biology of HIV for the past 25 years. He began his lecture with a video to remind attendees of the history and impact of HIV and AIDS worldwide, from the reluctance of the government and religious institutions to address AIDS because of prejudice towards “the Four H Club”—Haitians, hemophiliacs, homosexuals, and heroin users—in the early 1980s, to the impact of combination therapy for HIV in the mid-1990s, to the current epidemic of HIV/AIDS in major metropolitan areas, including New Orleans.

Garcia-Martinez discussed his contributions to the state of knowledge about the pathogenesis of HIV and potential therapeutic strategies to reduce viral load in HIV-infected individuals. For several years Garcia-Martinez, his colleagues, and members of his research team have had a particular interest in the transmission of HIV from mother to child. In the United States, the incidence of maternal transfer is low, but in sub-Saharan Africa, where HIV therapies are still hard to obtain, the transmission rate is 15%. What is it about the 85% of mothers in Sub-Saharan Africa whose breast milk is not conducive to HIV transmission? Garcia-Martinez and his research team are analyzing breast milk samples from women in sub-Saharan Africa and the United States to identify the components in human milk that reduce HIV transmission.

Another research focus of Garcia-Martinez’s research team has been the generation of chimeric mice that recapitulate the human immune system, the BLT (bone marrow/liver/thymus) mice. These mice are generated from immunodeficient NSG mice that are implanted with a small piece of human thymus and liver and then transplanted with hematopoietic stem cells. These BLT mice hold potential as a model system for exploration of molecular mechanisms of current HIV therapies and, ideally, for understanding how to eliminate HIV in infected individuals, the ultimate cure for HIV.

In his 2013 E.E. Just Award Lecture, Garcia-Martinez outlined for researchers the remaining basic cell biological questions for the next 30 years of HIV research—prevention of new HIV infections, prevention of progression to AIDS of those who are HIV infected, and the eradication of the virus in HIV-infected individuals.

—Latanya Hammonds-Odie, Georgia Gwinnett College

Reference


“It was incredible to exchange experiences and to talk with so many experts. Indeed the Annual Meeting is an event that I recommend for all professionals working in cellular and molecular biology.”

—João Agostinho Machado-Neto, PhD Student, Hematology and Hemotherapy Center, University of Campinas, São Paulo Brazil
ANNUAL MEETING Highlights

Public Information Committee

Reconsiders Press Book and Celldance, Looks at CellSlam Revival

It was a back-to-square-one meeting in New Orleans for the ASCB’s Public Information Committee (PIC), which agreed at its December 17 winter meeting to take a hard look in 2014 at its two longest-running projects—a journalists’ guide to breaking science news at the Annual Meeting and the annual cell biology video competition known as Celldance. PIC also will consider a one-time revival of CellSlam, the stand-up science “slam” contest that was so wildly successful in its four-year run that it became a victim of its own success by scaring off competitors. Since 1997, the PIC has published a “press book,” a guide for journalists that highlights breaking science news at the Annual Meeting.

The press book has evolved over time from a printed magazine to an online electronic publication. All PIC press books including the latest, Cell Biology 2013, are available at www.ascb.org/press-books. The press book’s target audience has also evolved. Traditional news coverage of basic science has shrunk. More bloggers and social media writers follow cell biology from afar. The public now goes directly to the press books online. ASCB has also expanded its communications abilities this year with the new ASCB Post, associated blogs, and a major social media effort. The question before PIC is whether a once-a-year press book pinned to the social media effort. The question before PIC is whether Celldance should be shut down or reinvented, he said.

PIC chair Simon Arkinson told the Committee that it must decide whether these projects and a possible CellSlam revival have value for ASCB. “The answer may not be yes or no but perhaps a scaling back or a new direction, but the goal of this meeting is not to solve all our problems,” Arkinson said. After a freewheeling but intense discussion, PIC agreed to a series of phone conferences this winter and spring, tackling each project in turn before bringing final recommendations to the full PIC meeting in May.

Brother, Son, Husband, Father, hobbyist in nature photography, and ASCB Public Information Committee (PIC) Chair Simon Arkinson moves to one of the ASCB’s Celldance award winners at the 2013 ASCB Annual Meeting in New Orleans, where he presented the winner with an iPad Air, awarded by contest judges Lee Ligon (middle) and Claire Walczak (right). Winner of the 2013 Elevator Speech contest Katie Bradford holds the prize, an iPad Air, awarded by contest judges Lee Ligon (middle) and Claire Walczak (right).

ANNUAL MEETING Highlights

2013 ASCB Public Information Committee

Simon Arkinson,* Chair
Scott Blystone
Duane Compton,* Vice Chair
John A. Cooper*
Kris Noel Dahl
Victor Faundez
Crisy Lee Gelling
Sriparna Ghosh
Elisa Konieczko
Lee Ligon*
Manuela Marins-Green*
Gavin McStay*
Tom Mattel*
Kathleen Morgan
James Offmann*
Deepri Pradhan
Nava Segen*
Jagesh V. Shah*
Clare Walczak*
John Fleischman*

PIC Associates
Bruno Da Rocha-Azevedo*
Lena Diaw
Pinar Gurel
Rita Miller
Paul Mungai*
Jagesh V. Shah*
John Fleischman*
Pinar Gurel
Lena Diaw
Rita Miller
Paul Mungai*
Jessica Polka
*In attendance at December meeting.

Celldance Goes for the “Really Useful” in 2013 Video Awards

Time-lapse videos of a cellular “heaven and hell,” a crane fly sperm cell undergoing cell division, and the early development of muscle cells were recognized with the top three awards in the ASCB’s Celldance “Really Useful” Cell Biology Video Contest for 2013. The special Public Outreach Award went to a group of cell biologists at the Dartmouth College Geisel School of Medicine, who danced their favorite cellular processes as The Cell Dance.

The Celldance awards were announced at the ASCB Annual Meeting in New Orleans and a winners’ reel posted at www.ascb.org/celldanceawards.

The first-place Really Useful video award, which includes a cash prize of $500, was presented to Bruno Cadot of the Myology Institute in Paris, France, for a time-lapse video showing differentiation and nuclear movement of mouse muscle cells over a three-day period.
with a rate of 20 minutes per frame.
Second place was a tie, so the Celldance judges combined and then divided the prizes from second and third place to award two second-place Really Useful cash prizes of $250. For his second-place entry, Rakesh Suman, University of York, UK, created Cellular Heaven and Hell, a time-lapse video shot through a Phase Focus Virtual Lens 20 microscope that uses photodynamics to produce label-free, high-contrast, quantitative phase images. With a frame shot every 10 minutes and played back at seven frames per second, the video of healthy human gut epithelial cells in “heaven” were made under normal physiological conditions, while the human gut epithelial cells in “hell” were treated with staurosporine to induce apoptosis.

The other second-place award went to Michael Shribak, Marine Biological Laboratory, Woods Hole, MA. His movie, also a time-lapse video, shows the metaphase stage of meiosis I in a crane fly (Nephrotoma suturalis) spermocyte. Metaphase was captured by means of a newly developed orientation-independent differential interference contrast technique.

In The Cell Dance, the winning entry in the Public Outreach category, Dartmouth researchers danced their favorite cellular processes. Pinar Caezel received the award and a cash prize of $250 for the art of dancing biologists from the labs of Henry Higgs, Amy Gladfelter, and Duane Compton.

---Cathy Venbrough, Annual Meeting Media Manager

What Goes Up—Elevator Speech Video Contest Draws Big Turnout
The premise is simple: The elevator door closes and your audience is trapped—a U.S. Senator, your dean, or your sister-in-law. Sell your science in 60 seconds or less! At the ASCB Annual Meeting in New Orleans, 20 entrants tried their luck at pitching their science using handheld cell phones or ASCB entrycams. In cooperation with the Public Policy Committee, the ASCB Public Information Committee staged the video contest for a second year to promote the elevator speech as a necessary communication skill for the 21st century biologist.

View the winning entries at www.ascb.org/2013-elevator-speech-results.

The judges appreciated the challenge of pitching 60 seconds of coherent science to a total stranger. What makes a prize elevator speaker, they decided, was the ability to grab a listener’s attention instantly, to move from the simple to the complex without jargon, and to put science into a real world context. Watch how the 2013 winner, Kate Bradford, starts from, "Basically, I study how cells eat" and arrives one minute later at neurodegenerative diseases.

Bradford, a graduate student at Johns Hopkins University, carried off the top prize, a new iPad Air. The runners-up were Abbas Padeganeh from the University of Montreal and Lauren Zasadil at the University of Wisconsin, Madison. Check out how Padeganeh goes from a scratch on his finger to centromeres.

The judges also made a special award to Stan Cohn of DePaul University, Chicago, who shot his elevator speech video in an elevator. Cohn’s favorite subject is diatoms, a vast group of unicellular algae that anchors the oceanic food chain and continues to intrigue cell biologists because of their silica cell walls. Using two students as straight men and beer cups as diatom models, Cohn’s entry was hysterical, but at 126 seconds it was too long for the rules. After wiping away their tears, the judges voted the special award.

---Jim Fleischman

Public Policy

Public Policy Committee Discusses Successful 2013, Plans Busy 2014
When the Public Policy Committee (PPC) convened in an ostentatiously decorated meeting room at the New Orleans Convention Center, future funding for federal science remained uncertain. That did not stop the Committee from outlining an ambitious series of activities for the next year.

The committee began by reviewing its 2013 activities. Highlights included:

A press conference at the National Press Club during the shutdown of the federal government that stressed the implications of the shutdown on research funded by the National Institutes of Health

Release of a policy paper that outlined the impact U.S. immigration policy has on the U.S. biomedical research community

Release of a white paper that identified key opportunities in the field of stem cell research

The second annual We Are Research advocacy campaign

The meeting was the last chaired by Doug Koshland, who had served as chair for three years and turned over the reins of the Committee to Connie Lee in 2014. In her remarks, Lee outlined an aggressive plan for 2014 that includes the continuation of the We Are Research program and the development of policy papers regarding issues significant to ASCB members.

In addition, the PPC will continue to examine reports in the popular press and elsewhere that results in a large percentage of scientific papers cannot be reproduced. PPC member Mark Winey will lead a subcommittee in an examination of the issue. Committee members Lee, Koshland, Carol Greider, and Paul Mungai and ASCB Executive Director Stefano Bertuzzi will serve on the subcommittee. Lee and Susan Wente will jointly lead an effort by the Committee to look at the problems facing the biomedical workforce.

---Kevin M. Wilson

Advocacy Toolbox Participant Achieves Fame
For the second year in a row, a participant in the ASCB Public Policy Committee’s Advocacy Toolbox session has gone on to win the Elevator Speech contest sponsored by the ASCB’s Public Information Committee (see p. 38).

For the last three years, senior scientists who have experience meeting with members of Congress have served as table leaders at the Public Policy Committee’s Advocacy Toolbox session. These advocacy veterans help educators refine the most important tools a science advocate has—a two-minute speech that explains his or her area of research in an easily understandable way. Each experienced advocate is joined by as many as nine beginners. As in other areas of science, the effort is collaborative: The veteran has the experience, but everyone at the table helps each other discover new ways to explain their science.

This year, Kate Bradford, a graduate student at Johns Hopkins University, hit the jackpot. Tom Pollard was the leader at her table and helped prepare her to go on and win the Elevator Speech contest later that day. To see Bradford’s winning elevator speech, go to www.ascb.org/2013-elevator-speech-results.

---Kevin M. Wilson

A vote at the Public Policy Committee meeting
Women in Cell Biology

Committee Plans Joint Efforts and a Push for Women Speakers

Discussions at the December Women in Cell Biology Committee (WICB) meeting in New Orleans focused on the need for international members on WICB and touched on WICB events at the 2013 Annual Meeting:

- Career Discussion and Mentoring Roundtables, which occupied two time slots during the meeting and likely will in the future
- Mentoring Theater — “The Interview: the Good, the Bad, and the Ugly” — a successful joint effort with the Minorities Affairs Committee (MAC), the Education Committee, and the Committee for Postdocs and Students (COMPASS) that will likely continue
- Presentation of the WICB Junior, Sustained Research, and Lifetime Awards, which this year broadened the availability of awards to three career levels
- WICB Network Reception
- Childcare Awards, which were disbursed to 24 recipients
- Plans for a joint panel with the International Affairs Committee are now in the works for the 2014 Annual Meeting.

Additionally, WICB Chair Sandra Masur discussed her report on WICB to the ASCB Council at its December 13 meeting. In her report to Council, Masur outlined WICB’s successes for 2013 and program plans for 2014 and emphasized the need for ASCB intervention in helping to spread the word about WICB’s Speaker Referral Service, which provides a list of women scientists who have been ASCB Annual Meeting Keynote speakers, Symposia speakers, and/or major award lecturers and thus have been vetted by an ASCB Program Committee. Masur reiterated to Council that there continues to be a lack of women speakers on programs at various conferences, as recipients of important awards, and on selection committees nationwide. Look for the Speaker Referral Service to be prominently displayed on ASCB’s website soon!

WICB will also be working with the iBiology team to recruit women speakers for iBioSeminars and iBioMagazine as well as participating with MAC in its new mentoring program funded by a grant from the National Science Foundation.

—Cheryl Lehr, WICB Staff Liaison

2013 Women in Cell Biology Committee

Sandra K. Maur,* Chair
Debra Page Baluch*
Julie A. Brill*
Paula A. Bubulya*
Marry Dasso*
Phyllis I. Hanson*
Rebecca Heald*
Trucia W. Hendrickson
Cheryl Lehr
Harvey F. Lodish
Mary Munson*
Inke Narhke, ex officio
W. James Nelson
Tabitha A. Peterson
Jennifer Rockelev-Canfield, ex officio
Courtney M. Schroeder,* Liaison from COMPASS
Anne Spang,* ex officio
JoAnn Trajo, ex officio
Angela Wäntinger-Ness
Ora A. Weitz*
Beverly R. Wendland*
Maria Elena Zavala, Liaison from MAC

WICB Associates
Alexandra M. Aizenstein
Diane L. Barber*
Susan L. Forsburg
Elizabeth Marincola*
* In attendance at December meeting
The audience enjoyed this year’s WICB Mentoring Theater.

- Identifying the multiple facets of candidates’ backgrounds and credentials that are considered by a search committee, e.g., their accomplishments and research plans as well as their collegiality. It was noted that some metrics may be considered that are not good measures of a candidate’s merit, e.g., the dreaded journal impact factor.

- How candidates can present themselves with confidence but not arrogance

The amazing thespians included Sophia Gayek, Tracie Gibson, Pinar Gurel, 2013 Porter Lecturer and former president Tim Mitchison, Lucy O’Brien, 2013 E.B. Wilson Medalist John Pringle, and Katherine Schmeidler. Pringle’s performance as the “guy who thinks he’s already got the job” was outstanding. Mary Dasso from WICB led a great team of writers who developed the skits.

A lively panel discussion continued to focus on many of these themes. Important questions raised by the audience included how to deal with interviewers who inappropriately ask for personal information, what to do when a candidate feels that an interview process is unfair, job search strategies, and how to apply for teaching positions versus research-focused positions.

Stay tuned for an upcoming WICB column featuring important take-home points from “The Interview.”

— Mary Dasso, National Institute of Child Health and Human Development, NIH

ANNUAL MEETING Highlights

WICB Junior Awardee for Excellence in Research: Samara Reck-Peterson with Sandra Masur and Ron Vale

WICB Sustained Excellence in Research Awardee: Elizabeth A. Miller with Sandra Masur and Martin Chalfie

WICB Lifetime Achievement Awardee: Lucy Shapiro with Sandra Masur and Christine Jacobs-Wagner

WICB thanks everyone who participated, especially the outstanding and generous group of table leaders who volunteered their time and expertise! The participants really appreciated the expert advice.

—Julie Brill, Hospital for Sick Children

WICB Network Reception

WICB’s annual network reception brought together a terrific international group of women for whom the many WICB activities make a difference. The event began with WICB Chair Sandra Masur and current WICB members summarizing the Committee’s year-round and Annual Meeting activities.

The reception continued with a presentation by Elizabeth Miller (Columbia University), the first recipient of the WICB Sustained Research Award, who shared her experiences with the challenges of establishing one’s own lab. Miller urged junior scientists to embrace opportunities, to seek help when needed, and to be aware of the importance and impact of doing their best (even on a study section). She encouraged people both to put themselves forward and to provide opportunities for others to succeed, especially one’s students. The larger group discussion then turned to the challenges and resources needed to navigate academia during pregnancy and as a young parent—sort of a “Mothers in Cell Biology” session.

The WICB Network continues all year through periodic updates on issues of interest. Join at www.ascb.org/WICBNetwork.html.

—Sandra Masur, Chair, Women in Cell Biology Committee

Once Again, Standing Room Only!

The Mentoring Theater—this year coordinated jointly by WICB, the Minorities Affairs Committee, the Education Committee, and the Committee for Postdocs and Students—covered “The Interview: the Good, the Bad and the Ugly.” Three skits were about different aspects of the interview process:

- Dealing with unconscious bias that interviewers may bring to their evaluation of candidates

- How candidates can present themselves with confidence but not arrogance

The amazing thespians included Sophia Gayek, Tracie Gibson, Pinar Gurel, 2013 Porter Lecturer and former president Tim Mitchison, Lucy O’Brien, 2013 E.B. Wilson Medalist John Pringle, and Katherine Schmeidler. Pringle’s performance as the “guy who thinks he’s already got the job” was outstanding. Mary Dasso from WICB led a great team of writers who developed the skits.

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Stay tuned for an upcoming WICB column featuring important take-home points from “The Interview.”

— Mary Dasso, National Institute of Child Health and Human Development, NIH

“ASCB organizes a great meeting very well. ASCB also promotes female scientists very well. WICB is one of the reasons I feel confident that I can be a successful female scientist and a successful mother.”

—Kassandra Ori, Postdoc, University of California, San Francisco

WICB Network Reception

The audience enjoyed this year’s WICB Mentoring Theater.
The ASCB Gratefully Acknowledges the Following 2013 Annual Meeting Supporters

BioDistrict New Orleans
General Support

Biology Open
Beer & Pretzels

BMC Biology
MiniSymposium

Genome Sciences Foundation
Support

throughs Welcome Fund
Minorities Affairs Programs

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Registration Bag Inserts

Cell Research
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Chroma Technology Corp
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The Company of Biologists
Travel Awards

Drummond Scientific
App Enhanced Company Listing

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MiniSymposium

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Meeting Bags

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Integrated DNA Technologies
App Enhanced Company Listing

Illumina
Hanging Banner Aisle Sign

Life Technologies
Registration Bag Inserts

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Registration Bag Inserts

Mirus Bio LLC
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National Institute of General Medical Sciences
Minorities Affairs Programs

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Registration Bag Inserts

The Rockefeller University Press
Support for the Gilula Award

Sutter Instrument
Hanging Banner Aisle Sign

UVP LLC
App Enhanced Company Listing

Vectoral Biochemical Corporation
Travel Awards

The ASCB wishes to express deep appreciation to all the exhibitors who attended the 2013 Annual Meeting and helped ensure its success.
Packaging Yourself as a Teacher

While training for a career in cell biology, many of us have discovered a passion for teaching and want to find a job in which teaching is of central importance. Others have found their primary passion in the laboratory but have also discovered the joys and satisfaction of student mentorship. Finally, there are those among us who are not excited about teaching but realize the importance of teaching credentials for obtaining an academic position in which research will take center stage. Regardless of which camp (or camps) you find yourself in, it is essential when preparing for an academic career to develop the skills necessary to show a prospective employer that you can succeed in the classroom. So what can you do to position yourself for college teaching in your future career?

Gaining Experience

It is simple to suggest that every potential future teacher should go out and get teaching experience. But where should you look? How do you balance gaining this experience with lab work? A good first step is to assess the type of position you would ultimately like to hold. A position at a research university is likely to require a minimal amount of classroom teaching when compared with a position at a liberal arts or community college. If research is your primary love, then look for chances to gain teaching experiences through your research. This could take the form of guest lectures on your research in classes at your institution or in the mentorship of undergraduates or graduate students in your lab. These small steps will give you the chance to discover your strengths and weaknesses as a teacher and mentor while retaining your focus on research activities.

For those who seek a more teaching-focused career, it is important to gain more complete classroom experience in which you are able to participate in course design and assessment. In this case, one good approach is to see if your institution has a college teaching preparation program for its graduate students and postdocs. Examples of such programs can be found at Yale University,1 Darmouth College,2 and Virginia Commonwealth University,3 among other places. For many future faculty, teaching assistantships are a good gateway to three-semester teaching experience because they offer opportunities both to observe the techniques of classroom veterans and to provide personal input on how particular sections they teach.

When preparing for a career in cell biology, many of us have discovered a passion for teaching and want to find a job in which teaching is of central importance. Others have found their primary passion in the laboratory but have also discovered the joys and satisfaction of student mentorship. Finally, there are those among us who are not excited about teaching but realize the importance of teaching credentials for obtaining an academic position in which research will take center stage. Regardless of which camp (or camps) you find yourself in, it is essential when preparing for an academic career to develop the skills necessary to show a prospective employer that you can succeed in the classroom. So what can you do to position yourself for college teaching in your future career?

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For those who seek a more teaching-focused career, it is important to gain more complete classroom experience in which you are able to participate in course design and assessment. In this case, one good approach is to see if your institution has a college teaching preparation program for its graduate students and postdocs. Examples of such programs can be found at Yale University,1 Darmouth College,2 and Virginia Commonwealth University,3 among other places. For many future faculty, teaching assistantships are a good gateway to three-semester teaching experience because they offer opportunities both to observe the techniques of classroom veterans and to provide personal input on how particular sections they teach.

When preparing for a career in cell biology, many of us have discovered a passion for teaching and want to find a job in which teaching is of central importance. Others have found their primary passion in the laboratory but have also discovered the joys and satisfaction of student mentorship. Finally, there are those among us who are not excited about teaching but realize the importance of teaching credentials for obtaining an academic position in which research will take center stage. Regardless of which camp (or camps) you find yourself in, it is essential when preparing for an academic career to develop the skills necessary to show a prospective employer that you can succeed in the classroom. So what can you do to position yourself for college teaching in your future career?
research productivity, your application should talk about how your teaching and research can be integrated to the benefit of both yourself and your students. If the institution is a small liberal arts college, then the search committee is not likely to care about how you would use graduate students in the development of a research program. By showing an understanding of the prospective institution, you will impress the search committee with your potential dedication to the open position.

College teaching is a rewarding career opportunity at any level. Although the job application process is never easy, with careful consideration and preparation you can position yourself to be competitive for academic positions in which your skills will be used to prepare the next generation of cell biologists. The bulk of the cover letter should emphasize your previous teaching experiences and how you will bring your particular teaching philosophy to the institution, including an emphasis on how your research can promote student participation. If possible, keep your cover letter to a single page. The more concise you are, the likelier that the thought in your cover letter will be completely considered and processed by the search committee.

Do Your Homework and Adapt

As you can see from the above suggestions, there is no one right path to take in the preparation for a career in college teaching. Each institution is a unique environment with its own particular picture of what an ideal faculty member looks like. The strongest piece of advice we can offer is to adapt your application package to the interests of each prospective employer. Take the time to look over the website of each institution to see what it advertises to the general public as its mission and strengths. If the institution is teaching-focused but also heavily emphasizes

Volunteer to Review CVs

We are always looking for more volunteers to help review cover letters, CVs, and resumes online for young ASCB scientists. If you can help, please contact Thea Clarke at tclarke@ascb.org.

Within the first two lines [of your cover letter], it should be clear to the reader what your primary interests and broad career goals are and how the particular job for which you are applying will help you meet those goals.

The U.S. Congress has reached agreement on a federal budget for FY14. The budget includes $1 billion (3.5%) more than in FY13 for the National Institutes of Health (NIH) and a $288 million (4.2%) increase for the National Science Foundation. The Congressional Budget Office, the keeper of the keys to sequestration, has determined that the FY14 budget also removes the need for another round of sequestration this year.

ASCB Speaks Up for U.S. Government Researchers

The ASCB is working to thwart efforts to limit travel to scientific meetings by federal scientists. In the closing hours of the 2013 session of Congress, the congressional to-do list remained as long as your arm. The budget for the federal government was still in flux, the House of Representatives had yet to vote on changes to U.S. immigration policy, and the Senate still had not acted on a long list of President Obama’s nominees to the federal judiciary.

Instead of addressing many of these hot-button issues, the House of Representatives passed the Digital Accountability and Transparency Act of 2013 and sent it to the Senate for its action. Included in the 32-page bill designed to increase accountability and transparency in federal spending was a small provision that, if passed by both houses of Congress and signed into law by the president, would carve into legal stone significant restrictions on the participation of federal scientists in scientific meetings.

In response, ASCB’s Executive Director Stefano Bernuzzi sent letters to Senate Majority Leader Harry Reid (D-NV) and Sens. Thomas Carper (D-DE), Jerry Moran (R-KS), and Tom Harkin (D-IA). In his letter, Bernuzzi said, “If this language were to become law, the ability of federal scientists to attend important scientific meetings connected to their area
PUBLIC POLICY Briefing

of research would be severely restricted and would adversely affect them and the work they do. This ‘scientific sequestration’ would compromise the quality of their work and foster a detached and increasingly isolated federal research program.”

Bertuzzi continued, “The scientific process does not take place in a vacuum. It is collaborative and depends heavily on interaction and the exchange of ideas and information that can only take place face-to-face at a scientific meeting. Not only is it important for researchers to share the results of their work with colleagues but it is critical for scientists to be able to learn what other research is taking place in their area of expertise.”

In follow-up meetings and conversations with ASCB Public Policy Director Kevin Wilson, Senate staff members have expressed their agreement with ASCB’s concerns. The ASCB will continue to lead the way on this issue in 2014. —Kevin M. Wilson

CONGRESSIONAL BIOMEDICAL RESEARCH CAUCUS

The Congressional Biomedical Research Caucus (CRBC) is celebrating its 25th year of informing and educating members of Congress about potential and actual advances in healthcare arising from our investment in biomedical research. The CRBC is bipartisan and bicameral and takes no dues from members. Representatives Steven Stivers (R-OH), Charles Dent (R-PA), Jackie Speier (D-CA), and Rush Holt (D-NJ) are the current co-chairs. During each session of Congress, some of the country’s leading research scientists provide members of Congress with monthly briefings about cutting-edge research. The CRBC has been proud to sponsor presentations by prominent scientists, including several Nobel laureates, to address such topical issues as women’s health, cystic fibrosis, heart disease, gene therapy, and effective drug design. Many of the stunning advances highlighted in their presentations have led to improved understanding of the causes of and treatment for human disease.

The 2014 briefing series continues the tradition by featuring talks on emerging technologies, bold initiatives, and research that will transform human health. The general public is invited to attend these presentations, which start at 12:00 noon. If you are interested in attending, please contact Lynn Marquis at cls@coalitionforlifesciences.org.

2014 Briefing Series

Feb. 26 The BRAIN Initiative: Building on a Century of Basic Research Cori Bargmann, The Rockefeller University Cannon Room 122

April 2 Understanding Circadian Rhythms: Understanding Sleep Disorders Michael Rosbash, Brandeis University Rayburn Room B-340

May 7 HIV/AIDS in 2014: Progress and Priorities Anthony Fauci, National Institute of Allergy and Infectious Disease, NIH Rayburn Room B-340

June 18 Paying Dividends: How Federally Funded Biomedical Research Fuels the Pharmaceutical Industry in the United States Mark Tessier-Lavigne, The Rockefeller University Rayburn Room B-340

July 16 Embryonic Stem Cell Research: Advances and Potential Lawrence Goldstein, University of California, San Diego Rayburn Gold Room, Room 2168

July 30 CRISPR: The Game Changing Therapeutic Technology Feng Zhang, McGovern Institute for Brain Research at MIT Rayburn Gold Room, Room 2168

Sept. 10 Aging and the Normal Brain Carol Bates, University of Arizona Rayburn Gold Room, Room 2168

Did You Know…?

You Can Gather Information with the ASCB Science Navigator

You have a three-in-one, online science intelligence gatherer available at your fingertips—the ASCB Science Navigator:

Simultaneously query three Navigator applications:

- ASCB BioExpert Navigator—identify scientific expertise and networks of experts
- ASCB Clinical Trials Navigator—trace the basic research behind clinical trials
- ASCB BioNews Navigator—keep up to date on the latest news about the biopharmaceutical and related industries

Retrieve 1,000 relevant results at a time.

View a 10-minute tutorial to guide you through the Science Navigator step by step.

All you need to access the Science Navigator is your ASCB membership login and password. Go to www.ascb.org and click on the ASCB Science Navigator icon to start your search.
A New Year is upon us, and the new iBiology site (ibiology.org) has a few tools to help you with your New Year’s resolutions:

“I will expand my knowledge of biology outside of my research field.”

The iBioSeminars section of the iBiology site is the place for you. You may decide to use the full-length seminars to prepare for school or job interviews or for qualifying exams.

“I will start thinking about my career options.”

You can start by watching Gregory Petsko’s talk “The Post-doctoral Situation” (ibiology.org/ibiomagazine/issue-10.html), followed by the recording of his December Live Q&A session (ibiology.org/hangout-with-a-scientist.html). Then tune in on March 6 to watch Keith Yamamoto’s Live Q&A on the same topic.

“I will engage my students in new ways.”

You may want to look to the iBioMagazine section for videos on science policy issues and career-related topics. Or organize a watch party with your students for our Live Q&A sessions with Lydia Villa-Komaroff (ibiology.org/hangout-with-a-scientist.html), and assign her iBioMagazine talk as homework beforehand.

“I will make more time for active learning in my classroom.”

Offering lectures as videos (“flipping your classroom”) will create space in your syllabus for active learning. You can start by flipping one or two lectures by using videos from the Exploring Biology section of iBioEducation as homework before class, such as Randy Schekman’s “Mysterious Membranes” or Bonnie Bassler’s “Tiny Conspiracies” videos (ibiology.org/iboveducation/exploring-biology.html). Or you can use the full Cell Biology Flipped Course materials developed for University of California senior undergraduates (ibiology.org/ibioeducation/taking-courses.html). Many of these videos also come with assessments, which you can access with an Educator account (ibiology.org/educator-registration.html).

“I will introduce my students to more primary literature.”

To meet that goal, you will want to visit the Making Discoveries section of iBioEducation (ibiology.org/iboveducation/making-discoveries.html) where each speaker describes the path that led to a discovery. Each video is associated with a research paper and activity questions.

We are preparing many more materials for the next year, so remember to sign up for our newsletter for regular updates (ibiology.org/join.html).

—The iBiology Team

seen on THE CELL

A confocal microscopy image of a Drosophila spermatid stained for nuclei (blue), actin filaments (red), and proteasomes (green). A recent study uncovered a role for ADP-ribosylation by tankyrase in the assembly and activity of proteasomes. The image depicting this critical stage of sperm differentiation was selected by the Beat Hansen Crabtree Group for inclusion in the March 2013 issue of Biomedical Beat, a monthly compendium of noteworthy NIGMS-supported research. See also Cell 153:614–627. Image by Hermann Stelzer, Sigl Benjamin-Irion, and John M Boland. OL-44651 This image is in the public domain and thus free of any copyright restrictions. However, as a matter of courtesy any user is encouraged to credit the content provider when reproducing the image.

The Cell: An Image Library (www.cellimagelibrary.org) is a freely accessible, easy-to-search, public repository of reviewed and annotated images, videos, and animations of cells from a variety of organisms, showcasing cell architecture, intracellular functionalities, and both normal and abnormal processes. Its purpose is to advance research, education, and training, with the ultimate goal of improving human health.

The Cell continues to evolve. Since the site launched just over three years ago, it has had 425,000 visits by over 325,000 visitors and has delivered over 1.6 million pageviews. It has more than 160,000 Facebook fans. It has been accessed from 204 countries, with Sierra Leone being the latest to join that group.

The Cell has been a source of images for use in books, articles, and videos, on websites, and even on buildings. But it is much more. The Cell is:

- A repository for material described in research articles
- A source of images for use in education
- A source of images for scientific research
- A source of data for research in image processing

The Cell was developed by ASCB under a Grand Opportunities grant from the National Institute of General Medical Sciences. Now The Cell has moved to the National Center for Microscopy and Imaging Research Cell Centered Database (CCDB), which manages the Library’s day-to-day operations under a perpetual license from ASCB. ASCB maintains a role in advertising the Library, soliciting images, serving as an advocate for the resource, and creating a community committed to The Cell.

—David Orloff

iBiology UPDATE

iBiology for the New Year

A New Year is upon us, and the new iBiology site (ibiology.org) has a few tools to help you with your New Year’s resolutions:

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—The iBiology Team

The iBiology Team
The ASCB 2014 Call for Nominations

Bruce Alberts Award for Excellence in Science Education

Who is Eligible: An individual who has demonstrated innovative and sustained contributions to science education, with particular emphasis on the broad local, regional, and national impact of the nominee’s activities. Nominees must be ASCB members, but the candidate and support letter authors need not be.

How to Apply: Provide a letter of nomination, a CV, and a letter from three or more people outside the nominee’s institution.

Awards: The winner is presented a plaque and will speak at a Minisymposium at the Annual Meeting. Expenses to attend the Annual Meeting are paid.

Deadline: April 1 (electronic submission to Thoa Clarke at tclarke@ascb.org)

Public Service Award

Who is Eligible: An individual who has demonstrated outstanding national leadership in support of biomedical research. Nominees must be ASCB members. The award winner may, but need not, be a scientist.

How to Apply: Provide a letter of nomination with a description of the nominee’s advocacy for, and promotion of, scientific research.

Awards: The winner gives the Public Service Award Lecture at the ASCB Annual Meeting and receives a certificate. Expenses to attend the Annual Meeting are paid.

Deadline: April 1 (electronic submission to Kevin Wilson at kwilson@ascb.org)

Early Career Scientist Award

Who is Eligible: A scientist who has demonstrated outstanding scientific achievement. Nominees must be ASCB members, but the candidate need not be.

How to Apply: Provide a nomination package that includes a CV, a letter describing the nominee’s scientific achievement and mentoring support of underrepresented minority students and scientists.

Awards: The winner receives a plaque, a monetary prize, and will speak in a Minisymposium at the Annual Meeting. Expenses to attend the Annual Meeting are paid.

Deadline: April 1 (electronic submission to Christina Stadilank at csadilank@ascb.org)

E.E. Just Lectureship

Who is Eligible: A minority scientist who has demonstrated outstanding scientific achievement. Nominees must be ASCB members, but the candidate need not be.

How to Apply: Provide a nomination package that includes a CV and a letter describing the nominee’s scientific achievement and mentoring support of underrepresented minority students and scientists.

Awards: The winner gives the E.E. Just Lecture at the Annual Meeting and receives a plaque and a monetary prize.

Deadline: April 1 (electronic submission to Deborah McCall at dmccall@ascb.org)

WICB Awards

Junior Award for Excellence in Research

Who is Eligible: A woman in an early stage of her career (within six years of appointment to an independent position at the nomination deadline) who is making recognized scientific contributions to cell biology, developing a strong independent research program, and exhibits the potential for achieving a high level of scientific excellence and leadership.

How to Apply: Provide a letter of nomination, a CV, and up to three letters of support, including at least one from outside the nominee’s institution.

Awards: The winner is presented a plaque and a monetary prize.

Deadline: July 15 (electronic submission to ascbinfo@ascb.org)

Senior Award for Excellence in Research

Who is Eligible: A woman at the senior level (7-15 years in an independent position at the nomination deadline) who has demonstrated a marked record of achievement and leadership, and has made unusually significant contributions to cell biology and/or other cell biology-related disciplines.

How to Apply: Provide a letter of nomination, a CV, and up to five letters of support, including at least one from outside the nominee’s institution.

Awards: The winner is presented a plaque and a monetary prize.

Deadline: July 15 (electronic submission to ascbinfo@ascb.org)

Bruce Alberts Career Award

Who is Eligible: An individual who has demonstrated outstanding scientific achievement and mentoring support of underrepresented minority students and scientists.

How to Apply: Provide a letter of nomination, a CV, and up to three letters of support, including at least one from outside the nominee’s institution.

Awards: The winner is presented a plaque and a monetary prize.

Deadline: July 15 (electronic submission to ascbinfo@ascb.org)

ASCB Post

“Professional Media Training at ASCB 2013 Spiced Up My Presentation”
Christina Szalinski reports on her one-on-one presentation training at Oratorio at the 2013 ASCB Annual Meeting. Szalinski learned how to get out from behind the podium and engage her audience.

“ Suppressing the Microtubule-Cutting Enzyme Fidgetin Allows Injured Adult Nerves to Regrow”
At the 2013 ASCB Annual Meeting, Lanfranco Loo of Drew University and colleagues presented their research on fidgetin as a potential therapeutic for spinal cord injury and unhealing wounds.

“At Journal Impact Factor Loses Respectability, Can Altmetrics Provide Other Measures?”
The San Francisco Declaration on Research Assessment endorsed 18 recommendations for new standards of research assessment to move away from journal-based metrics, but what are the alternatives? Christina Szalinski reports.

ASCB Executive Director Stefano Bertuzzi’s “Activation Energy” Blog
“ASCB Kaluza Prize Reflects ASCB’s Concern that Young Scientists Are Now a Vulnerable Population”
In 2013 ASCB partnered with Beckman-Coulter to offer the Kaluza Award, a $5,000 prize for outstanding research as a graduate student. Bertuzzi is proud of this initiative to promote young scientists and facilitate their professional development.

COMPASS (Committee for Postdocs and Students) Blog
“Show Me the Money—Funding Opportunities for International Graduate Students and Postdocs”
Hashem Dbosk highlights opportunities for international graduate students and postdocs to get their own grants.

“Need a Break from Your Science? Try Citizen Science!”
Rachel Ames reports on resources for scientists who want to try citizen science as a reminder of the joy that brought them into their careers.
The Editorial Board of Molecular Biology of the Cell has highlighted the following articles from the December 2013 and January 2014 issues. From among the many fine articles in the journal, the Board selects for these Highlights articles that are of broad interest and significantly advance knowledge or provide new concepts or approaches that extend our understanding.

e-catenin actin-binding domain alters actin filament conformation and regulates binding of nucleosom and disassembly factors

e-catenin regulates transitions in actin organization between cell migration and cell–cell adhesion by controlling barbed-end polymerization of unbranched actin filaments and inhibiting Arp2/3 complex and cofilin regulation of actin filament branching and disassembly.
Mol. Biol. Cell 24 (23), 3710–3720

mTOR regulates phagosome and entotic vacuole fission
M. Krajcovic, S. Krishna, L. Akkari, J. A. Joyce, and M. Overholtzer

Phagosomes and entotic vacuoles harboring engulfed cells undergo an mTOR-regulated process of vacuolar fission that distributes engulfed contents throughout lysosome networks. Amino acid recovery from engulfed cells activates mTORC1 and rescues engulfing cells from the effects of amino acid starvation.

Mol. Biol. Cell 24 (23), 3736–3745

Cadherin-6B is proteolytically processed during epithelial-to-mesenchymal transitions of the cranial neural crest

Cranial neural crest cells activate mTORC1 and rescue engulfing cells from the effects of amino acid starvation.

Mol. Biol. Cell 24 (23), 3746–3760

NEAT1 long noncoding RNA regulates transcription via protein sequestration within subnuclear bodies

PARASPECKLES are subnuclear structures formed around NEAT1 long noncoding RNA (lncRNA).

PARASPECKLES become enlarged after proteasome inhibition caused by NEAT1 transcriptional activation, leading to protein sequestration into paraspeckles. The NEAT1-dependent sequestration affects the transcription of several genes, arguing for a novel role for lncRNA in gene regulation.

Mol. Biol. Cell 25 (1), 169–183

Distinct roles of cell wall biogenesis in yeast morphogenesis as revealed by multivariate analysis of high-dimensional morphometric data
H. Okada, S. Ohrui, C. Roncero, J. B. Norpour, and M. Ohya

To better define how cell wall structure affects morphogenesis, the morphology of yeast cells was analyzed quantitatively after treatment with the three drugs that inhibit different aspects of cell wall synthesis. These drugs induced both similar effects, including broader necks and increased morphological variation, and distinct effects.

Mol. Biol. Cell 25 (2), 222–233

Centrosome-dependent asymmetric inheritance of the midbody ring in Drosophila germ line stem cell division
V. Salzmann, Cuie Chen, C.-Y. A. Chiang, A. Tyatsoochai, M. Mayer, and Y. M. Yamashita

The midbody ring (MR) is asymmetrically segregated during asymmetric divisions of germline stem cells (GSCs) in Drosophila. Male GSCs, which inherit the mother centrosome, exclude the MR, whereas female GSCs, which inherit the daughter centrosome, inherit the MR. Moreover, stem cell identity correlates with the mode of MR inheritance.


Depletion of the Smc5/6 complex leads to an abnormal chromosome structure, i.e., curly chromosomes with characteristic hypo-condensed centromeres. Immunofluorescence microscopy of Smc5-depleted human A549 cells typically reveals that topo II is not present at centromeres and enriched at the distal chromatin arms. This imbalanced distribution of topo II creates an emblematic starburst-like figure at metaphase, which underscores the significance of Smc5/6 in structural control of chromosomes.


Natural Killer (NK) lymphocytes contain lysosome-related organelles known as lytic granules that, upon formation of an immunological synapse (IS) with the target cell, polarize toward the IS to deliver their contents to the target cell membrane. Tuli et al. (Mol. Biol. Cell 24, 3721–3733) have identified a small GTP-binding protein, Arl8b, as a critical factor required for NK cell–mediated cytotoxicity. Their findings indicate that Arl8b drives the polarization of lytic granules toward the IS between an effector NK lymphocyte and the target cell. The left image is a transmission electron micrograph of a control NK–target cell conjugate in which polarization of lytic granules toward the IS is evident. In contrast, an Arl8b-silenced NK–target cell conjugate shows a defect in polarization of lytic granules toward the IS (right). (Image: Amit Tuli and Michael B. Brenner, Harvard Medical School.)
GRANTS & OPPORTUNITIES

A list of current grant and other opportunities can be found at www.ascb.org/grants. The following items were added since the last issue of the Newsletter:


Postbaccalaureate Research Education Program (PREP) (R25). The National Institute of General Medical Science PREP program encourages applications from research-intensive institutions that propose to develop recent baccalaureate science graduates from diverse backgrounds underrepresented in biomedical and behavioral sciences so that they have the necessary knowledge and skills to pursue PhD or MD/PhD degrees in these fields. The program provides support for well-designed courses for skills development and extensive research experiences aimed at preparing individuals from diverse backgrounds to complete doctoral degrees. Application deadlines: March 31, 2014; January 25, 2015; January 25, 2016. http://grants.nih.gov/grants/guide/notice-files/R25-076.html.

Revisions to Add Single Cell Analysis to Active Research Projects (U01). This National Institutes of Health funding opportunity aims to stimulate the adoption and validation of novel powerful single cell analysis (SCA) approaches by supporting collaborations of currently funded U01 investigators with developers of the SCA approaches. The collaborations must be new, possess the potential to substantially further the aims of the U01 project, and provide iterative and informed feedback to the SCA developers for continued refinement. Collaborations of U01-funded investigators with investigators currently funded through the Common Fund Single Cell Analysis Program are strongly encouraged. Letter of intent deadline: March 4, 2014; application deadline: April 4, 2014. http://grants.nih.gov/grants/guide/notice-files/RFA-RM-13-023.html.

Shared Instrumentation Grant Program (S10). The National Institutes of Health (NIH) Office of Research Infrastructure Programs Shared Instrument Grant Programs encourages applications from groups of NIH-supported investigators to purchase or upgrade a single item of expensive, specialized, commercially available instrumentation or an integrated system that costs at least $100,000. The maximum award is $600,000. Types of instruments supported include, but are not limited to, confocal and electron microscopes, biomedical imagers, mass spectrometers, DNA sequencers, biosensors, cell-sorters, X-ray diffraction systems, and nuclear magnetic resonance spectrometers. Application deadline: March 2, 2014. http://grants.nih.gov/grants/guide/notice-files/RFA-RM-14-073.html.

Upcoming Local Meetings

ASCB is pleased to provide funds for young scientists (graduate students and postdocs) to organize one-day local meetings. Such meetings involve two or more institutions (within the United States or international), and topics can range from basic science to career development as long as there is clear relevance to the broadly defined field of cell biology.

The next deadline to apply for funds is April 1, 2014. Applicants must be or become members of the ASCB. For more information visit www.ascb.org and click on “Meetings.”

Exploring Cell Biology through Protein–Protein Interactions
Ryan University (Toronto, Ontario, Canada)
February 21, 2014

Bay Area Postdocs: Workshop on Scientific Teaching
San Francisco State University (San Francisco, CA)
February 22, 2014

The Research Experience for Peruvian Undergraduates (REPU) Seminar
Yale University (New Haven, CT)
March 10, 2014

Navigating Lipid Research in Baltimore: Cell to System
Carnegie Institution for Science Rose Auditorium (Baltimore, MD)
April 11, 2014

Cell Biology across the Bay
Santa Clara University (Santa Clara, CA)
May 3, 2014

Visualizing Cancer: Microscopy and Beyond
CR-UK Beatson Institute (Glasgow, UK)
September 2014

Triangle Cytoskeleton Dynamics and Regulation Meeting
Research Triangle Park (Durham, NC)
September 2014

First Puerto Rico Cancer Research Meeting
Universidad Central del Caribe (Bayamon, Puerto Rico)
October 3, 2014

What’s our cure for high blood pressure?
Low Rates.

Tell us you’re a member.
See how much more you could save with your American Society for Cell Biology member discount from GEICO.

1-800-368-2734
geico.com/sci/ascb

GEICO. Some discounts, coverages, payment plans and bonuses are not available in all states or all GEICO companies. Discount amount varies in some states. One group discount applicable per policy. Coverage is individual. In New York a premium reduction may be available. GEICO is a registered service mark of Government Employees Insurance Company, Washington, D.C. 20076; a Berkshire Hathaway Inc. subsidiary. GEICO Endorsements © 1999-2013 GEICO.
MEETINGS Calendar
A complete list of upcoming meetings can be found at http://ascb.org/global-meetings-calendar. The following meetings were added since the last issue of the Newsletter:

Meetings added since the last issue of the Newsletter:
ascb.org/global-meetings-calendar. The following meetings were

- August 30–September 4, 2014. Paris, France

- May 16–21, 2014. San Diego, CA

- December 8–12, 2018.
- December 2–6, 2017.
- December 12–16, 2015.

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- December 12–16, 2015.
Dear Labby,

We recently had a five-year external review of our department, and there was a session for the review committee to meet with us students. It went along nicely until a member of the committee said they had been given data by the dean of the graduate school showing that students in our department take longer to finish their PhDs than those in any other basic science department in our medical school. She then asked, more pointedly, if we felt there was any systemic factor that was operating. We were all surprised and said we had not been aware of this and that, at first thought, we saw no factor that would be giving rise to this pattern. Then, the committee member asked us each to state what year we were in. As we went around the 10 of us the answers were four in the fifth year, five in the sixth year, and one in the seventh year. We were then asked to estimate how much longer we would be taking and we all said at least one more year, except for the seventh-year student, who is finishing this spring.

The committee didn’t push further for explanations, and the meeting turned to other topics. Afterwards, we were all really upset. We hadn’t realized how bad our department looked relative to others in this regard, and we all felt guilty that we hadn’t been “self-tracking” ourselves better. As we were all standing around, one student said “Maybe we should ask Labby about this.” What perspectives do you have?

—Lagging Strands

Dear Labby,

The Mystery of Variable PhD Thesis Kinetics

We recently had a five-year external review of our department, and there was a session for the review committee to meet with us students. It went along nicely until a member of the committee said they had been given data by the dean of the graduate school showing that students in our department take longer to finish their PhDs than those in any other basic science department in our medical school. She then asked, more pointedly, if we felt there was any systemic factor that was operating. We were all surprised and said we had not been aware of this and that, at first thought, we saw no factor that would be giving rise to this pattern. Then, the committee member asked us each to state what year we were in. As we went around the 10 of us the answers were four in the fifth year, five in the sixth year, and one in the seventh year. We were then asked to estimate how much longer we would be taking and we all said at least one more year, except for the seventh-year student, who is finishing this spring.

The committee didn’t push further for explanations, and the meeting turned to other topics. Afterwards, we were all really upset. We hadn’t realized how bad our department looked relative to others in this regard, and we all felt guilty that we hadn’t been “self-tracking” ourselves better. As we were all standing around, one student said “Maybe we should ask Labby about this.” What perspectives do you have?

—Lagging Strands

Got Questions?

Labby has answers. ASCB’s popular columnist will select career-related questions for publication and thoughtful response in the ASCB Newsletter. Confidentiality guaranteed if requested. Write us at labby@ascb.org.

Dear Labby,

There are a host of issues here. Let’s first deal with the committee visit itself. It was appropriate for them to probe this issue with you and it seems likely the dean had encouraged them to do so. Asking each of you to specify what year you are in was probably unnecessary, however, since they could have certainly gotten that data, student by student, from the chair or dean and it would have added your collective uneasiness in the session. But the two most important issues are the factors underlying these kinetics and the quality of oversight that is being provided.

We all know that each PhD odyssey is unique and that a great many factors are at play. Luck itself is a huge factor in science, and there are many “fast-finishing” students who are no more scientifically talented than others taking longer. A need to change labs, for whatever reason (today often due to a PI’s loss of funding), can slow a student’s progress and, likewise, a well-funded lab can actually be a more comfortable setting for a student than is ideal (although a properly ambitious student should be self-aware of any such torpor). Another factor is the zeal some PIs and their students have for publication in a so-called prestigious journal, and such pursuit can add substantial time to a project.

What then is the proper oversight process? Herein rests a profound responsibility of the thesis advisory committee, beyond their review of the student’s science itself. The committee must keep tabs on a student’s progress and seek to mitigate any factors that are slowing it unduly. This can even require the committee to engage the PI or, in certain cases, the chair or dean.

It would be good for you and a small group of two or three other students to arrange a meeting with the dean to discuss this issue, not so much with reference to each of your own situations but in regard to the collective PhD kinetics. The dean will be concerned (indeed appears already to be so), and perhaps a more emphatic charging of the thesis committees can help. But all that said, the time to complete a degree is determined by a complex set of equations, with many variables. It is doubtful that the longer average time to completion in your department reflects some unique, single variable, but the degree to which your chair and the faculty of the department emphasize the timetable for students to finish is certainly of major importance.

—Labby

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