THE AMERICAN SOCIETY FOR CELL BIOLOGY
The science of life, the life of science

ASCB NEWSLETTER

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Tilghman, Walter Run for ASCB President

Eight Candidates Seek Council Seats

Shirley Tilghman
Princeton University

Peter Walter
University of California San Francisco School of Medicine/HHMI

The two 2013 nominees for ASCB President-Elect are Shirley Tilghman, Princeton University, and Peter Walter, University of California San Francisco School of Medicine/HHMI. The elected candidate will serve on the Society's Executive Committee as President-Elect in 2014, ASCB President in 2015, and Past President in 2016.

Also on the ballot are eight candidates (see page 5) running for four Council seats. Those who are elected will start three-year terms on January 1, 2014.

ASCB emailed a link to the Society's electronic ballet and candidate biographies to regular, postdoctoral, and emeritus members on April 1. The election will close on April 30, and results will be announced in the May issue of the *ASCB Newsletter.*

Election, continued on page 5

VOTE

On April 1, ASCB sent each regular, postdoctoral, and emeritus member a link to the ASCB election site. Since spam filters may prevent some messages from being received, members are encouraged to go to www.ascb.org to vote. Your member number (the same number used to access *MBoC*) will enable you to vote and ensure that each member votes just once. If you do not receive the link and/or do not know your member number, contact the ASCB at 301-347-9300 or ascbinfo@ascb.org. ■

Public Access to Public Research: A Radical Idea Grows Respectable

In Washington, DC, they broke out the bubbly February 22 at the Dupont Circle offices of SPARC, the Scholarly Publishers and Academic Resources Coalition. "A magnum of *prosecco* in the office," laughs SPARC executive director Heather Joseph. "It was kind of fun." The occasion for celebration was a directive issued that afternoon by the White House Office of Science & Technology Policy (OSTP) to all federal agencies that fund at least $100 million a year in research and development.[1] The directive requires investigators funded by those agencies to make available for online public access within a year of publication all journal papers, including their data sets and supplementary material, that were supported by taxpayer dollars. It was a milestone in a struggle over access to the scientific literature that began in the 1990s and in which ASCB played an important role.

OSTP, continued on page 6

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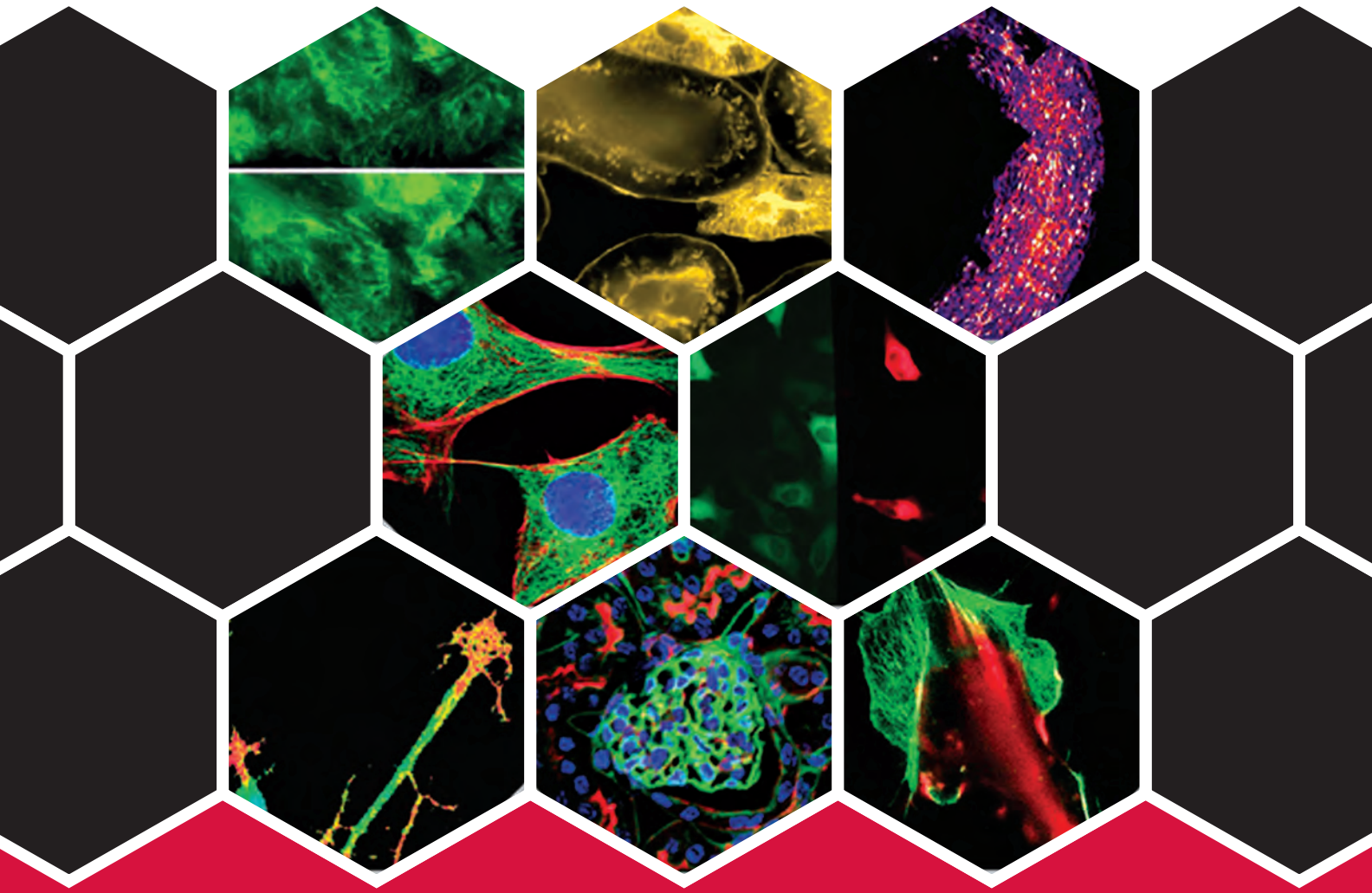

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PRESIDENT'S Column

The Sequester and the Funds That Support Our Research

The standoff between President Obama and Congress has just led the country into "The Sequester," with a 5.1% across-the-board cut in spending by the federal government, which has resulted in a $1.6 billion cut in the National Institutes of Health (NIH) budget. It seems almost certain that our community will feel significant pain as these reductions are implemented. Indeed, for many ASCB members—me included—the reductions will likely bring significant retrenchment through cuts to awarded grants as they come up for noncompetitive annual renewal. Worse, possibly much worse, researchers writing new or competing renewal proposals to NIH—again, I'm one of those—will probably find that their likelihood of success is substantially reduced.

Don Cleveland

So what can we do? For those who have been actively working to educate everyone in the political process about the value of biomedical science, it's time to redouble our efforts. For those who haven't yet gotten directly involved, now is an excellent time to start. I realize that it is easy just to watch from the sidelines, but if you're one of those who hasn't yet spoken up (have you called or written your member of Congress?), please join ASCB's call to action. ASCB is proud to be a leading advocate for biomedical science, an effort that is spearheaded by our Public Policy Committee, chaired by Doug Koshland. Contact ASCB Public Policy Director Kevin Wilson at kwilson@ascb.org if you'd like to make that personal commitment to join ASCB's ongoing effort. Numbers do matter. Your voice does matter.

[R]esearchers writing new or competing renewal proposals to NIH…will probably find that their likelihood of success is substantially reduced.

Lamentable Changes to the NIH Grant Review Process

With fewer dollars available to NIH, a pressing problem will continue to be how to ensure that the most deserving work is appropriately recognized and funded. ASCB Executive Director Stefano Bertuzzi and I are launching an initiative with just that goal in mind. But before I get to the specifics of that, let me start by noting that I got involved in the NIH grant process in 1981, when I wrote my first application to NIH (it was successful!), just before I took my first independent position at Johns Hopkins University School of Medicine. In the ensuing 33 years, I've seen multiple changes to the application process and the way proposals are evaluated. I've also had the opportunity to write and/or review applications to other funding agencies in the United States and to review for the major funding entities in Canada, Europe, and Japan. Each review system has strengths, but until recently I've always thought the NIH system represented the best of the various approaches.

Over the last four years, however, the NIH system has undergone major changes, with the most striking change being implemented about two years ago. Up to that time, a primary aspect of the American grant process that distinguished it from those in most other countries was that American applications permitted investigators to describe in depth what they proposed—substantially more in depth than was allowed in other grant applications. That was changed in 2010, when the permitted length of the description of a proposed experimental plan

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Executive Director

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Numbers do matter. Your voice does matter.

for NIH was cut in half. Perhaps even more significantly, referees are now instructed to abandon what had previously been paragraphs of critical comment. Now, referees are asked to provide only bullet points on the strengths and weaknesses of Overall Impact, Significance, Investigator, Innovation, Approach, and Environment.

As a contributor to many prior NIH review panels, I lament the loss of the paragraph, with its complete sentences. In well-written reviews (positive or negative), the traditional NIH format allowed a coherent discussion of the referee's take on—and rationale for—whether a specific application was field leading, middle of the road, or field trailing. Unhappily, the complete sentence is now an endangered species in NIH review, with most comments provided in sentence fragments that are more appropriate for Twitter (with its 140 character limit) than they are for presenting a cogent argument that will be of value either to the NIH program staff as they make the final recommendation for funding or to the PI who wrote the application. Perhaps even more lamentable is that the move to shorter applications has de-emphasized evaluation of the applicant's productivity, thus limiting the ability of both junior and senior investigators to present the case that they have contributed to a particular field of inquiry, or thought deeply about it. Who among us doesn't think that recent achievement is a strong predictor of future success?

…I think all of us would agree that getting examples of outstanding reviews to NIH referees can only serve the community well.

An ASCB Initiative to Improve the Grant Review Process

Clearly, I'm one of those who thinks that the shorter applications represent a regressive change that has diminished the unique advantage previously enjoyed by participants in the American review system. While it must be admitted that our community is divided over whether the shorter applications have helped or hurt facilitating the funding of the best science, I think all of us would agree that getting examples of outstanding reviews to NIH referees can only serve the community well. I recognized the need for this firsthand when I recently had the opportunity to write my first reviews in the new format. Faced with a blank page, I asked the Center for Scientific Review for examples of outstanding reviews in the current format. That proved to be eye opening and depressing: even the examples of "good" reviews were poorly written, providing little insight to program staff or the PI on whether there were exciting, potentially field-leading questions being posed and whether the approaches proposed had a high likelihood of success by the PI and his or her team.

Stefano Bertuzzi and I have developed a plan to address this problem. I met in February 2013 with Richard Nakamura, the Director of the Center for Scientific Review, the NIH entity that oversees the lion's share of NIH grant reviewing. I proposed that examples of optimally written reviews would likely be of use to both novice and seasoned referees. The ASCB is now in the earliest phases of collecting a set of such reviews (redacted, of course, to remove unique identifiers of specific PIs). Once the ASCB has assembled these, we will seek to partner with other scientific societies to make these sample reviews available broadly to all members of NIH review panels. I ask for your help in this initiative. If you have examples of what you think are outstanding reviews in the current NIH format, please send them to us at President@ascb.org.

We need to defend the funding that makes our research possible, and that need leads us into battle on several fronts. Informing Congress and the public about the vital importance of the scientific endeavor is one important approach. Ensuring that what funds are available are put to best use is another. I hope that you will join the ASCB in both efforts. ■

Election, continued from page 1

2011 ASCB President Sandra Schmid served as Nominating Committee Chair. Also serving on the Committee were Simon J. Atkinson, Jeffrey L. Brodsky, Margaret L. Gardel, Wallace F. Marshall, J. Richard McIntosh, Jennifer Roecklein-Canfield, Jean D. Schwarzbauer, and Anne Spang.

The ASCB thanks the Nominating Committee for its service and the nominees for their willingness to serve the Society. The Society encourages all eligible ASCB members to exercise their right to vote. ■

—Thea Clarke

ASCB 2013 Council Nominees

Martha S. Cyert
Stanford University

Raquell M. Holmes
Boston University and University of Connecticut Health Center

Ian G. Macara
Vanderbilt University Medical Center

Tom Misteli
National Cancer Institute, NIH

Ivan Robert Nabi
University of British Columbia

Jodi Nunnari
University of California, Davis

Gia Voeltz
University of Colorado, Boulder

Claire E. Walczak
Indiana University School of Medicine

ASCB Seeks Exemplars of Peer Review

Changes to the peer review process at the National Institutes of Health (NIH) have resulted in what has been described as "review by tweet." Instead of thoughtful paragraphs that provide the applicant with insights into how to improve his or her application, reviewers are now encouraged to write in short, bulleted phrases that lend themselves more to Twitter than to a proposal to fund basic biomedical research.

We think there is a way to improve reviews currently provided to grant applicants, and we would like your help. The ASCB is asking you to share with us examples of reviews you received that were most helpful to you as you worked to improve a project. We would like to assemble a collection of these reviews (identity protected, of course) that we can share with our young colleagues as they prepare to serve on their first NIH study sections.

Please send your grant reviews in PDF form to president@ascb.org. (The text can be redacted to protect your identity.) ■

OSTP, continued from page 1

Until the OSTP order, the only federal agency that required public access posting was the National Institutes of Health (NIH). As mandated by a 2007 congressional appropriations bill, NIH has required all grantees since April 2008 to deposit for online access through PubMed Central (PMC) an electronic copy of the final version of any published peer-reviewed paper that draws on NIH-funded research. The new OSTP directive will extend a similar mandate to 19 additional federal agencies. Included for the first time are the National Science Foundation (NSF), the Department of Energy (DoE), and the Department of Agriculture, all major players in biology research. Each must now come up with its own public access program.

When PMC opened for business in February 2000, it had one issue each from *MBoC* and *PNAS*. Today PMC has 2.6 million articles from 1,221 full content, 248 partial content, and 2,014 "selective deposit" journals.

From Fear to Acceptance

The OSTP directive is a significant victory for the "open access" movement, says Joseph who champions the cause at SPARC and before that as Publications Manager for ASCB. "It's been a long haul to get the concept of open access understood," says Joseph, "and debunk the fears that grew up around it, which unfortunately many of the commercial publishers are happy to perpetuate. We had to get people to understand that you can have a healthy journal publishing market using an open access model, that subscription access can co-exist peacefully [with open access]."

Corks were not popping all over the scientific publishing world in honor of OSTP. Nevertheless, many of the big commercial scientific publishers that had once vigorously opposed public access had become more or less resigned to the new rules, especially after President Obama signed the 2010 renewal of the America COMPETES Act, which authorized the extension of public access to other federal agencies. The wide acceptance of public access to federally funded research was revealed in 2011 by a public relations disaster around a short-lived bill called the Research Works Act (RWA). Supposedly promoted by a large commercial scientific publisher, the bill would have gutted the NIH open access program by defunding it. Instead, RWA provoked across-the-political-spectrum outrage from "information wants to be free" Internet techies to Macmillan Publishing.[2]

The new OSTP rule was greeted more warmly, albeit without the high spirits and with a splash of anxiety by nonprofit scholarly journal publishers such as the American Institute of Physics (AIP) in College Park, MD. "Overall, I'm pleased with the balance and flexibility that's indicated in the document," says Executive Director and CEO Frederick Dylla. "I'm a little nervous because you're dealing with a bureaucracy and you're often not dealing with the same set of folks, year after year."

Dylla, who has been working in advance of the expected OSTP rule with DoE and NSF on a tagging system to identify federal funding of submitted papers, believes that these sort of "devil in the details" problems will make or break the wider federal public access policy. Many of the policy details of the OSTP directive are not widely appreciated, Dylla contends, especially since the news media have overplayed the open-the-gates aspects. "Unfortunately the headlines focus on 'the government is going to

Heather Joseph

Harold Varmus

Gary Ward

Elias Zerhouni

open up the pay wall.' But if you actually read the [OSTP] memorandum, it's much more nuanced."

First, OSTP acknowledges the real value that publishers add to scientific publishing, he says. The savings from dropping printing on paper are minor compared with the continuing expenses of managing the peer review process, setting editorial standards, performing the multi-layered typesetting required in modern HTML manuscripts, and building a 24/7 online access platform and permanent archive. "The cost varies from $1,000 to $4,000 per article depending on the journal," says Dylla. "Somebody has to pay for that."

Other aspects of the OSTP order that Dylla likes are is its encouragement for public and private partnerships and its flexibility in implementing public access. For example, the famous NIH requirement for posting within 12 months is offered as a guideline, not a mandate, and agencies need to look at differences among fields and disciplines. "A 12-month embargo," says Dylla, "is not such a problem in a fast-moving, well-funded field like biomedicine but there's plenty of evidence that for humanities, social sciences, or mathematics, a 12-month rule can be problematical."

Although he doubts that every publisher and every open-access advocate will be satisfied with the implementation of the new rules, Dylla believes that public access and peer-reviewed journal publishing must learn to co-exist. "This is one of the most important things that scientific societies do for science and for society."

Whatever is to be read in the new OSTP ruling, it comes as a result of a long campaign toward public access in which ASCB made history. In the earliest days of the public access debate in 1999, ASCB was the first scholarly publisher to turn over the entire contents of a journal, the November 1999 issue of *Molecular Biology of the Cell* (*MBoC*), to NIH for free online access through PMC. The *Proceedings of the National Academy of Science* (*PNAS*) signed on soon after but only to post its research articles at first.

MBoC helped to work out the technical bugs with NIH on transferring and posting the contents accurately. "We were really the guinea pigs in terms of quality assurance," Joseph remembers. When PMC opened for business in February 2000, it had one issue each from *MBoC* and *PNAS*. Today PMC has 2.6 million articles from 1,221 full content, 248 partial content, and 2,014 "selective deposit" journals.

"Free and Immediate Access" to Research

The open access wars began in 1999 when Harold Varmus, Nobel laureate, ASCB member, and then the Director of the NIH, unveiled a radical proposal. In the Internet age of global science, Varmus declared that it was feasible, ethical, and practical to give the public, including scientists, free and immediate access to all biomedical research already paid for by federal money. Varmus called his theoretical NIH public repository "E-Biomed." Later Varmus envisioned a broader mission for a "Public Library of Science," or PLoS. In the end, PubMed Central (PMC) became the NIH repository.

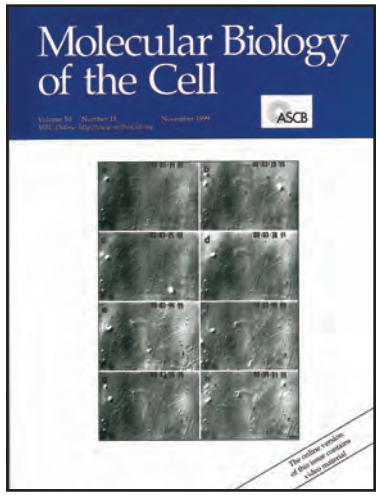
From the outset, the original Varmus proposal was greeted with shock and awesome anger. The shock came from scholarly journal publishers who feared that their subscription income would evaporate. The anger came from the big commercial scientific publishers who imagined their business models collapsing.

At ASCB, Joseph recalls, shock was replaced by curiosity. "The ASCB being a journal publisher," she recalls, "was, of course, interested in protecting our journal but was more interested in serving the interests of our members. So we immediately hiked up to the NIH campus and sat with Dr. Varmus, asking him to talk a little bit more about what he was doing." Varmus explained the potential and equity of free online access but began to back off on including "all" materials and on "immediate" availability.

Meantime, the ASCB was doing statistical research. *MBoC* had been online since October 1997, and by analyzing usage patterns, the Society believed that it had discovered a workable business model. Usage was frontloaded, mostly during the first month after online publication with a bit less in the second month before it dropped off. "The graph looked like a backwards hockey stick," says Joseph. "The true value of the articles seemed to be concentrated in the first two months," says Joseph. Calculating that libraries would see the value and not cancel, then ASCB Executive Director Elizabeth Marincola and *MBoC* editors Keith Yamamoto and David Botstein offered the full *MBoC* contents to NIH with only a two-month subscriber embargo. It was a gamble that paid off, says Joseph, in financial and scientific returns.

Varmus asked ASCB members and other scientists to sign a pledge refusing to peer review or edit for or to submit or subscribe to any journal that would not post federally funded research papers in an online public repository such as PMC within six months of their initial publication.

However, by the fall of 2000, only eight journals had joined the NIH repository. That December, Varmus, who had left NIH to become president of the Memorial Sloan-Kettering Cancer Center, was at the ASCB Annual Meeting to unveil his idea for PLoS as an online, open access library for scientific research. He also proposed a scientific boycott of the big commercial journals, which were resisting any talk of open access tooth and nail. Varmus asked ASCB members and other scientists to sign a pledge refusing to peer review or edit for or to submit or subscribe to any journal that would not post federally funded research papers in an online public repository such as PMC within six months of their initial publication.



The November 1999 Molecular Biology of the Cell *was the first complete issue of a scholarly journal placed into PubMed Central for online public access.*

Gary Ward, a University of Vermont microbiologist, was in the audience, listening spellbound. Open access as described by Varmus spoke to many of Ward's frustrations about the commercial journal system. The boycott seemed the perfect response. "I realized that scientists actually had a lot of power. Without us submitting, without us reviewing, or without us sitting on editorial boards, the system couldn't continue." Ward signed the pledge and then watched the boycott fall apart. "The petition got a lot of people energized and got the discussion going," Ward recalls, "but it really revealed how entrenched the for-profit publishers were. A lot of the people who signed the petition discovered that they didn't have a lot of options. One by one, scientists started violating their pledges."

[T]he NIH open access initiative was left in limbo until the new NIH director, Elias Zerhouni, appointed in 2002, took up the cause once again.

A Mandate for Investigators Funded by NIH

Varmus was back at the 2002 ASCB Annual Meeting with a new plan and new allies, Patrick Brown of Stanford University and Michael Eisen of the University of California, Berkeley.[3] They announced the conversion of PLoS from a science library into a journal publisher. With a $9 million grant from the Gordon and Betty Moore Foundation behind them, Varmus *et al.* unveiled two flagship, peer-reviewed, open access online journals, *PLoS Biology* and *PLoS Medicine*. (PLoS became PLOS in 2012.) The idea was to widen the choices for publishing high-impact research in fully open access journals.

Still, with the Varmus departure, the NIH open access initiative was left in limbo until the new NIH director, Elias Zerhouni, appointed in 2002, took up the cause once again. Under Zerhouni, NIH aggressively pushed for a significant expansion of the repository. A largely resistant scientific publishing community pushed back. In February 2005, under Zerhouni, NIH issued a voluntary policy to deposit authors' manuscripts into the PMC repository. Eventually, after many hearings and meetings, not without drama, among government officials and various stakeholders, Congress decided in 2007 to convert the voluntary policy into a mandate for all investigators funded by NIH. With the new OSTP directive, it moves to the other federal open access programs.

Back in 2007, the publishers were not amused, but the times, the Internet, and the public demand for health information were changing. The official NIH policy notice issued in January 2008, at the start of Zerhouni's last year as NIH Director, spelled it out for all NIH grantees. Any peer-reviewed paper accepted for publication after April 2008 was subject to the new mandatory deposit rule. Grantees who would or could not transfer the public deposit right would not be eligible for future funding. To many longtime observers, this was a major achievement for science, for scientists, and for access to the research that is paid for by taxpayers.

Six months later, the dam burst in U.S.

financial markets and, in the economic tsunami that followed, some observers wondered if scholarly publishing might go the way of Lehman Brothers. Yet despite PMC and the Great Recession, NIH figures show that between 2007 and 2011, the number of biological and agricultural science journals increased by 15% and their subscription prices by 26%.[4] Medical and health science titles rose by 19% and prices by 23%. This was not a shrinking business. Something else changed; the public was using public access. Now on a typical weekday, 700,000 users will access PMC. Looking at IP addresses alone, PMC says that 25% of users are from universities, 17% from companies, and 40% from the general public.

If public access is now mainstream, the arguments over "open access" continue. After hearing Varmus address the ASCB Annual Meeting, Ward became a leading advocate within the ASCB Council, especially during his term as Treasurer from 2002 to 2008. Looking back, Ward believes that there were numerous turning points in the open access wars but singles out two—the NIH 2008 policy change and ASCB's 1999 decision to put *MBoC* into PMC with a daring two-month embargo. "That really set the parameters of the debate," Ward says, because it demonstrated that a journal could publish under a subscription model and still offer public access.

Data Sets, Too

Of the new OSTP directive extending the public access rule, Ward is happy to see the wider reach across federal agencies but also that for the first time, the new rule brings data sets into public access. "For a practicing scientist, that's a pretty big deal. In many cases, papers just summarize the data. As data sets get bigger and bigger, whether it's image data or high-throughput screening data, it would be really nice as a reader to go back and look at the original data. The OSTP policy for the first time addresses that issue."

What worries Ward is that the OSTP directive is an extension of an executive order. "If the next president who is elected doesn't believe in open access, it could disappear overnight," Ward says. For that reason, he favors a legislative solution currently embodied in a bill before both houses called the Fair Access to Science & Technology Research Act (FASTR). The FASTR bill has bipartisan support in both houses of Congress, says Ward, pointing out that one of the Senate sponsors is the well-known conservative John Cornyn (R-TX).

"If the next president who is elected doesn't believe in open access, it could disappear overnight," Ward says.

FASTR has differences in language from the OSTP directive, which would tailor its applicability to a smaller number of federal agencies, 11 versus 19 for OSTP, says Ward. But FASTR would shorten the allowable embargo to six months. "Many of us have been arguing for a long, long time that a year is way too long," Ward argues. "If you're a scientist, you can't wait 12 months. Six months is still too long. And going on *MBoC*'s experience, two months is adequate. But going from 12 months to six months is a big step forward."

But for Ward, the key difference in FASTR is that it would allow public access and public reuse of data without copyright restrictions. "The poster child for this is text mining," Ward explains. "That's a huge lost opportunity that we can't go in and electronically mine the text of the corpus of scientific literature." FASTR addresses that, says Ward. "Agencies must come up with a way to license work that's funded by the government in such a way that citizens who pay for that work can now reuse it." ■

—John Fleischman

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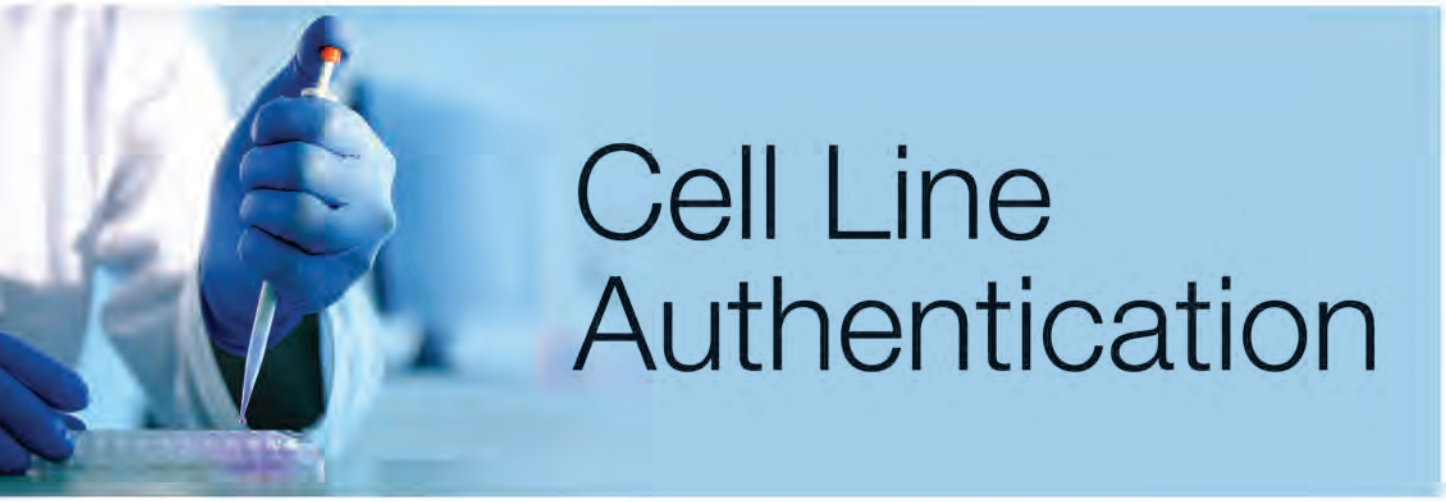

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Maximal Mentoring: Take Turns Leading

A mentor is a trusted and wise advisor who helps guide the career success of his or her mentee. There is a large body of social science literature that objectively supports the assumption that a mentee with an effective mentor is more likely to succeed than is a person without a mentor or with a poor mentor. Many of us have anecdotal evidence covering the full range of effectiveness that mentoring has had on the career success and satisfaction of our protégés.

Beverly Wendland

Our goal here is to present advice, based on our experiences and those of our colleagues, on how to maximize the effectiveness of mentoring. Many of these ideas were humorously presented at the WICB Mentoring Theater presentation at the 2012 ASCB Annual Meeting.[1] We also call attention to some excellent sources of advice for mentors and mentees (see sidebar). The bottom line, however, is that effective mentoring is not a one-way relationship—while the most evident result may be the enhancement of the mentee's career, achieving that goal requires that both mentor and mentee be willing and active partners in the endeavor.

Goals and Types of Mentoring

When looking from their successful perch, mentors should remember the old saying, "If you see a turtle on top of a fence post, you can be sure he didn't get there by himself." And mentees should realize that it's much easier to find your way to the top of the fence post with help from good mentors.

The primary goal for the mentee is enhanced career success; the benefit to the mentor can be practical (e.g., succession planning) or it can be altruistic. In the most traditional sense, the mentor is a role model who can share strategies for navigating the path to the place the mentee wishes to reach. The support provided by mentors can be formally separated into two types: career-related and psychosocial. Career-related mentoring often derives from the mentor's senior position in the organization that provides him or her with experience to help the mentee learn the ropes, gain exposure, and obtain promotions. In science, the mentor often helps by reading and criticizing manuscripts and advising on the preparation of grant applications and oral presentations. At times the mentor may become the mentee's sponsor and directly influence the mentee's success by opening doors for him or her. The other type of mentoring, psychosocial mentoring, emphasizes interpersonal aspects that deal with the mentee's "…sense of competence, identity and effectiveness in a professional role."[2]

Sandra K. Masur

While a traditional mentor can provide both types of support, peer-mentoring can be an effective supplement that fulfills unique needs. For example, peer mentoring can be especially helpful for those who are from groups not represented by the senior mentor, e.g., women and minorities in science.[3] In fact multiple mentors can help mentees deal effectively with the variety of challenges they face.

Role of the Mentor

Your job as an effective mentor is to keep the goals of the mentee at the center of the relationship and tailor your interactions according to the specific needs and personality of the mentee. A good mentor listens, reaches out to the mentee on a regular basis, and connects the mentee to her or his professional network. A strong relationship is based on trust, on open lines of communication, and on a nonjudgmental attitude that fosters honest exchanges.

Role of the Mentee

Perhaps the least-discussed aspect of mentoring relationships is the responsibility of the mentee. Successful mentoring requires active participation of the mentee as well. In fact the mentor–mentee relationship is like a dance in

Women in Cell Biology

[T]he mentor–mentee relationship is like a dance in which the partners take turns leading.

[B]e sure to frequent the local social space where you may have the opportunity to bump into colleagues—you never know where your next great idea, connection, or collaboration may begin.

which the partners take turns leading. Your job as a mentee is not to view the mentor as the commander who barks orders to be followed by you; the mentee should take on the responsibility of defining her or his goals and seeking advice on attaining those goals. Importantly, the mentee must recognize when help is needed and be willing to ask for advice at times when things are not going well and it may feel embarrassing to admit weakness or shortcomings.

It was amazing how strongly this idea resonated with the thespians and with audience members at the 2012 WICB Mentoring Theater. It is truly impossible to help a mentee who is nonresponsive to a mentor's overtures and offers to meet, humorously recounted as a rebuff by a mentee who refused to "go out" with his mentor (meaning, wouldn't "go out for coffee," but you can imagine the giggles this elicited!). A mentee must also respect the time and effort a good mentor spends, and should prepare for meetings and follow through.

Formal vs. Informal Mentoring

Some organizations have recognized the importance of establishing formal mentoring relationships by appointing "official" mentors or mentoring committees for junior faculty. This promotes a sense of responsibility and expectations and avoids the possibility that the junior person might incorrectly think he or she is imposing on a "superior."

In addition, informal mentoring, in which the junior person spontaneously approaches people for advice on an ad hoc basis, has great value. This interaction enlarges the mentee's network of colleagues and certainly increases the diversity of opinions and views that can be integrated into either a career plan or a more short-term solution to a problem.

Speaking of going out for coffee, be sure to frequent the local social space where you may have the opportunity to bump into colleagues—you never know where your next great idea, connection, or collaboration may begin. Hiding out in your office is not the solution to your problems. Another way to stimulate unexpected advice is to walk the hallways and visit your colleagues' offices—email is not the only way to communicate, and you can get some exercise at the same time.

Experienced Mentor vs. the Peer Mentor

An experienced mentor can be a wonderful resource for a mentee by providing advice on subjects such as how to overcome career hurdles of various types, how to manage time and juggle multiple demands, and when to apply for particular grants or competitive memberships. Asking how someone who has "been there" and has successfully navigated a particular challenge can provide really useful strategies for the mentee to adopt or adapt.

On the other hand, peer mentors, who include people with the same background facing the same challenges as the mentee, may be especially helpful for advising on how to navigate a situation the mentee is facing. Furthermore, rules may have changed over time, and the experienced mentor's advice may be out of date. Peer mentoring fulfills the added benefit of community building among those who will be colleagues for the long term.

The rewards of mentoring for both mentor and mentee were well summarized by Benjamin Franklin, who wrote, "Tell me and I forget. Teach me and I may remember. Involve me and I learn." ■

—Beverly Wendland and Sandra K. Masur for the Women in Cell Biology Committee

Sources of Advice for Mentors and Mentees

American University School of International Service Mentor/Mentee Toolkit
www.american.edu/sis/mentoring/tips.cfm

Science Careers Content Collection: Mentoring Advice
http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2012_02_03/caredit.a1200015

Relationship Tips for Mentors and Mentees
www.gsvc.org/docs/MentoringTips.pdf

ASCB Career Publications
www.ascb.org/careerpublications.html

WICB/Career Strategy Columns
www.ascb.org/wicbnewsletter.html

References

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Government to Follow NIH and ASCB on Access to Research Literature

The federal government has issued a major memorandum ordering most federal research and development agencies to develop plans to make the results of the research they fund freely available to the public. This government-wide directive follows the 2008 congressionally mandated instructions making the results of research funded by the National Institutes of Health (NIH) freely available after a 12-month embargo.

Long before government agencies were directed to make the research they fund publicly available, the ASCB began granting free access to all papers in its journal *Molecular Biology of the Cell* only two months after publication. This was a cutting-edge policy at the time, especially for a nonprofit Society.

Because of its leadership in this area, the ASCB has worked with the Obama Administration for several years in the development of the policy that was finally released in February. In both 2010 and 2012, the ASCB worked with the White House Office of Science and Technology Policy (OSTP), first to educate them about the ASCB's success and then to provide them with our formal views on issues associated with public access, including financial implications and the importance of the policy for researchers at small universities that are unable to afford subscriptions to large numbers of journals.

In explaining benefits of the government-wide policy, the OSTP directive says that the policies will "accelerate scientific breakthroughs and innovation, promote entrepreneurship, and enhance economic growth and job creation." Highlighting the benefits of public access to federally funded research, the NIH estimates that its policy has allowed more than 90,000 new biomedical manuscripts to be made publicly available each year. The demand for these papers is extremely high, with more than 700,000 unique users accessing material from the NIH's PubMed Central repository each weekday.

To read the White House Access Directive, go to www.whitehouse.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research.

To read the views the ASCB provided to the OSTP, go to www.ascb.org/publicpolicyissues.html.

For more detail about the history of the public access movement and ASCB's involvement, see the related story on page 1. ■

—Kevin M. Wilson

Senate Committee Told Cuts Have Consequences

With only hours to go before the March 1, 2013, deadline for sequestration, the Senate Budget Committee held a hearing to discuss the impact on the economy of federal investment. Despite the title of the hearing, committee members on both sides of the aisle quickly turned the hearing into yet another opportunity to promote their particular solution to the problem of sequestration, which was, at that time, the only topic of discussion in Washington, DC.

When asked about the impact of sequestration on education and research, Undersecretary of Treasury Polly Trottenberg told the committee that, despite broad bipartisan support, funding for the U.S. National Institutes of Health (NIH) "is down almost nine percent over the last 10 years, down, not up, down. And, in terms of its purchasing power, it's down 20 percent over the past 10 years."

Senator Jeff Sessions (R-AL), the ranking Republican on the committee, appeared to dismiss the undersecretary's comments by reminding the committee that the NIH budget had been doubled in a five-year period ending in 2003.

Budget Committee members expressed frustration at not being able to sufficiently fund valuable federal programs while making

cuts in other places. Senator Ron Johnson (R-WI) lamented that because of the size of entitlement programs, only 35% of the overall federal budget was open for reductions. Johnson said, "You know, quite honestly, I don't want to reduce infrastructure spending or basic science and research, but here's why we have to reduce something in the federal government is (sic) because we've taken 65 percent of our federal budget off budget. So that all these cuts are falling on a very small sliver."

Hunter Rawlings, President of the American Association of Universities, reminded the committee that research labs are like small businesses. Rawlings said that the impact of a lost grant goes beyond one person. "So," Rawlings told the Budget Committee, "some of them have four-person companies, think of it that way. Some of them have 12-person, some of them have 25-person companies doing grant work. So, what do you do when you get this cut in the fourth or fifth year of your research? You let go your workers because you can't pay them any longer." ■

—Kevin M. Wilson

Science in the House!

One of the first tasks a new member of the U.S. House of Representatives has upon entering Congress is to organize a high school visual art competition in his or her district. Each spring, competitions take place in congressional districts across America. Art by the finalists from each district is displayed around the U.S. Capitol in Washington, and each winning work of art is displayed in the underground hallway through which members of Congress and their staff walk on their way between the House office buildings and the Capitol.

A resolution sponsored by Representative Candice Miller (R-MI) that has now passed the House of Representatives will create a House-wide academic competition to promote student achievements in the areas of science, technology, engineering, and mathematics (STEM). In a statement following bipartisan passage of the resolution, Miller said, "Today, through its overwhelming bipartisan support of the Academic Competition Resolution, the House acknowledged the need to improve this nation's focus on education in STEM-related fields, which have become vital in today's global economy."

The details of the competition, including where the winning projects will be displayed, have yet to be worked out. ■

—Kevin M. Wilson

Volunteer to Review CVs

We are 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. ■

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2013 ASCB Annual Meeting

THE AMERICAN SOCIETY FOR CELL BIOLOGY

New Orleans, Louisiana

December 14–18, 2013 | Don Cleveland, President | Arshad Desai, Program Chair

SYMPOSIA

Organelle Dynamics

Vivek Malhotra, Centre for Genomic Regulation, Barcelona
Peter Walter, University of California, San Francisco/HHMI
Beverly Wendland, Johns Hopkins University

Aneuploidy

Angelika Amon, Massachusetts Institute of Technology/HHMI
Duane Compton, Geisel School of Medicine at Dartmouth
David Pellman, Dana-Farber Cancer Institute/HHMI

The Dynamic Genome

Laura Landweber, Princeton University
Harmit Malik, Fred Hutchinson Cancer Research Center/HHMI

Cellular Mechanics

Tania Baker, Massachusetts Institute of Technology/HHMI
Taekjip Ha, University of Illinois at Urbana-Champaign/HHMI

New Horizons in the Nucleus

Martin Hetzer, Salk Institute for Biological Studies
David L. Spector, Cold Spring Harbor Laboratory

FRONTIER SYMPOSIA

Cell Biology and Medicine

Bruce Spiegelman, Dana-Farber Cancer Institute/Harvard Medical School
Huda Y. Zoghbi, Baylor College of Medicine/HHMI

Physical Biology of the Cell

Philippe Cluzel, Harvard University
Frank Jülicher, Max Planck Institute for the Physics of Complex Systems
Ewa Paluch, MRC Laboratory for Molecular Cell Biology, University College London

Keynote Speakers

Roger Y. Tsien
University of California, San Diego/HHMI

J. Craig Venter
The J. Craig Venter Institute

MINISYMPOSIA TOPICS

Cell Biology at the Host-Microbe Interface

Co-Chairs: *Emily Troemel*, University of California, San Diego; *Raphael Valdivia*, Duke University Medical Center

Covering how microbes—pathogens, symbionts, and commensals—interact with and manipulate cell biological processes in their hosts, including microbial or viral manipulation of membrane traffic, cytoskeletal dynamics, or signaling pathways, with a focus on the microbial molecules responsible for such manipulations and their corresponding host targets. *Seven speakers will be selected from abstracts.*

Cell Biology of Cancer Cells and of the Tumor Microenvironment

Co-Chairs: *Mikala Egeblad*, Cold Spring Harbor Laboratory; *Gerard Evan*, University of Cambridge; *Clare Isacke*, Breakthrough Breast Cancer Research Centre, Institute of Cancer Research; *Johanna Joyce,* Memorial Sloan-Kettering Cancer Center

Covering all aspects of cancer cell biology with an emphasis on the interaction with, and response to, stromal cells and the extracellular matrix, cancer cell heterogeneity, invasion, and metastasis. *Fourteen speakers will be selected from abstracts.*

Cell Biology of the Neuron: Development, Degeneration, and Regeneration

Co-Chairs: *Frank Bradke*, German Center for Neurogenerative Diseases (DZNE); *Mei Zhen*, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, and University of Toronto

Covering cellular events for neuronal development that are recapitulated, to some degree, during degeneration and regeneration, including recent findings in the molecular and cellular mechanisms underlying the development, pathology, and regeneration of neurons in diverse model systems. *Seven speakers will be selected from abstracts.*

Cell-Cell/Cell-Matrix Interactions and Intercellular Signaling

Co-Chairs: *Sally Horne-Badovinac*, The University of Chicago; *Johanna Ivaska*, University of Turku; *Rajat Rohatgi*, Stanford University School of Medicine; *Clare Waterman*, National Heart, Lung, and Blood Institute/NIH

Covering cell-cell interactions including signaling, migration, adhesion, differentiation, morphogenesis, and higher order complexity in tissues and development, with overall emphasis on how cells interact with their environment and neighboring cells in human and animal model systems. *Fourteen speakers will be selected from abstracts.*

Cell Cycle Control and Cell Division

Co-Chairs: *Iain Cheeseman*, Whitehead Institute for Biomedical Research and Massachusetts Institute of Technology; *Monica Bettencourt-Dias*, Instituto Gulbenkian de Ciência; *Michael Laub*, Massachusetts Institute of Technology; *Mark Petronczki*, Cancer Research UK London Research Institute; *Simonetta Piatti*, Centre de Recherche en Biochimie Macromoléculaire; *Melina Schuh*, MRC Laboratory of Molecular Biology

Travel Awards

More than $140,000 has been budgeted for the 2013 Travel Awards.

- **Childcare**
- **Junior Faculty**
- **Postdocs**
- **Undergraduate Students, Graduate Students**
- **Minorities**

Deadline: September 4th

Meeting Threads

Cell Biology and Medicine

Cell Biology and the Physical Sciences

NEW! Professional Development

Meeting Opens Saturday Morning!

- **Minorities Affairs Committee Programs**
- **International Roundtable for Postdocs/Students** *(by invitation)*
- **Subgroups:** 12:30 pm-5:00 pm
- **Keynote:** 6:00pm

Deadlines

July 24
Member-Organized Special Interest Subgroup Application

July 30
Regular Abstract Submission *(Minisymposium talk or poster consideration)*

Sept 4
Regular Abstract Submission *(poster consideration only)*

October 10
Early Meeting Registration

October 16
Late Abstract Submission

Covering mechanisms in cell cycle control and cell division in prokaryotes and eukaryotes, including cell cycle (regulatory circuits, cell cycle evolution, checkpoints, and interplay with other aspects of cellular physiology); nuclear and cytoplasmic division (chromosome segregation, cytokinesis, and organelle partitioning); meiosis; asymmetric division; cell division in physiological and pathological conditions; and innovative tools to study these processes. *Twenty-one speakers will be selected from abstracts.*

Cell Migration in Health and Disease

Co-Chairs: *Erik Sahai*, Cancer Research UK London Research Institute; *Orion Weiner*, University of California, San Francisco

Covering the latest developments in cell migration: ranging from basic mechanisms of cell migration for single cells in vitro to the regulation of cell migration involving multiple cell types and complex matrix geometries in an organismal setting during normal cell health (immune cell function, wound healing, development) or disease (cancer metastasis). *Seven speakers will be selected from abstracts.*

Cells Shaping Tissues: Mechanisms Underlying Cell Polarity, Fate Specification, and Morphogenesis

Co-Chairs: *Anna-Katerina Hadjantonakis*, Memorial Sloan-Kettering Cancer Center; *Jody Rosenblatt*, Huntsman Cancer Institute, University of Utah School of Medicine; *Geraldine Seydoux*, Johns Hopkins University School of Medicine/HHMI; *Tadashi Uemura*, Kyoto University

Covering how cells acquire specific fates, polarity, and shapes during development, and how these properties contribute to the organization and function of tissues and organs. Analyses incorporating quantitative imaging techniques and/or modeling are welcome. *Fourteen speakers will be selected from abstracts.*

Cytoskeletal Polymers and Motors: From Single Molecules to Ensembles

Co-Chairs: *Gary Brouhard*, McGill University; *Rut Carballido-López*, Micalis Institute, INRA; *Andrew Carter*, MRC Laboratory of Molecular Biology; *Gregory Pazour*, University of Massachusetts Medical School; *Margot Quinlan*, University of California, Los Angeles; *Torsten Wittmann*, University of California, San Francisco

Covering all types of cytoskeletal proteins from prokaryotes to eukaryotes and at all scales: functional and biophysical studies of cytoskeletal filaments, their dynamics, associated proteins and motors; structure and function of cytoskeletal organelles including cilia, centrosomes, and centrioles; and cytoskeletal mechanisms underlying control of cell shape, subcellular organization, and motility. *Twenty-one speakers will be selected from abstracts.*

Intracellular Trafficking and Organelle Biogenesis

Co-Chairs: *Jon Audhya*, University of Wisconsin-Madison; *Chris Fromme*, Cornell University; *Phyllis Hanson*, Washington University School of Medicine; *Luca Scorrano*, University of Padova and Venetian Institute of Molecular Medicine; *Nava Segev*, University of Illinois at Chicago; *Tobias Walther*, Yale University

Covering the sorting and transport of proteins and membranes between intracellular organelles and mechanisms underlying organelle biogenesis: organelle morphology, composition, biogenesis and maturation, organelle-organelle interactions; cargo sorting, membrane deformation mechanisms, formation and fission of membrane vesicles and tubules, membrane/motor interactions, targeting and fusion of membrane vesicles and tubules; and regulation of trafficking events and pathways. *Twenty-one speakers will be selected from abstracts.*

Organelle and Proteome Quality Control Mechanisms

Co-Chairs: *Jeffrey Brodsky*, University of Pittsburgh; *Daniel J. Klionsky*, University of Michigan, Life Sciences Institute; *Alex Merz*, University of Washington School of Medicine; *Tricia Serio*, University of Arizona

Covering mechanisms that offset the catastrophic effects of cellular stress, including checkpoints that target polypeptides for degradation by the proteasome or proteases in the lysososme/vacuole or for refolding via molecular chaperones; proteins, lipids, and organelles that can be targeted for destruction via autophagy, shunted to cytoplasmic quality control compartments, or are inherited asymmetrically during cell division; and stress-inducible transcriptional programs that facilitate these protein triage pathways. *Fourteen speakers will be selected from abstracts.*

Organization, Stability, and Expression of the Genome

Co-Chairs: *Paula Bubulya*, Wright State University; *Victor Corces*, Emory University; *James Haber*, Brandeis University; *Megan C. King*, Yale University; *John Marko*, Northwestern University; *Amy Pasquinelli*, University of California, San Diego

Covering mechanisms in nuclear organization and support: subnuclear positioning and higher-order structure of chromosomes, DNA replication and repair, transcription-associated chromosome breakage/rearrangement, structures such as telomeres that maintain genome stability, nuclear bodies, nuclear envelope/lamina, nuclear transport, regulation of gene expression, transcription and processing of RNAs, nuclear functions for noncoding RNAs, and expression-linked changes in gene location/chromosome organization. *Twenty-one speakers will be selected from abstracts.*

Retaining Diverse Undergraduate Students in the Biological Sciences

Co-Chairs: *Anthony Koleske*, Yale University School of Medicine; *Omar Quintero*, University of Richmond

This panel discussion, followed by open discussion, will focus on establishing learning communities and the retention of majors in STEM fields.

Stem Cells and Their Niche in Tissue Homeostasis/ Regeneration and Disease

Co-Chairs: *Tudorita Tumbar (Doina)*, Cornell University; *Yukiko Yamashita*, University of Michigan

Covering broad aspects of stem cell biology, with an emphasis on cell biological aspects: how stem cells are maintained, proliferate, and commit to differentiation in the context of tissue homeostasis and regeneration, and how these complex cellular processes can be perturbed in disease. *Seven speakers will be selected from abstracts.*

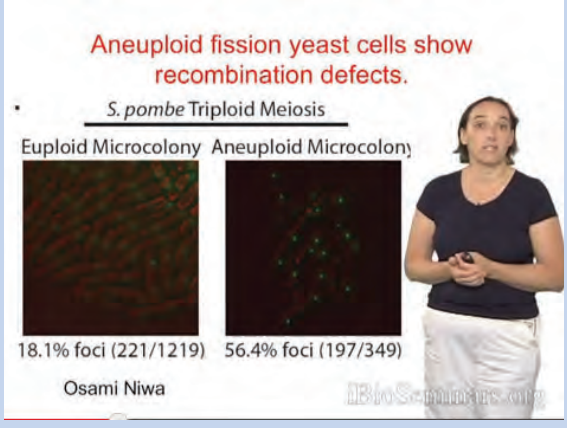
OVER
50%
of speakers in 2012 were postdocs or graduate students!

Two abstracts per sponsor (for regular, postdoctoral, and emeritus members). Undergraduate and graduate students may sponsor only their own abstract.

Two New iBioSeminars

Two new online seminars by Hopi Hoekstra (Harvard University) and Angelika Amon (Massachusetts Institute of Technology and the Howard Hughes Medical Institute) are now available at iBioSeminars.org.

Hopi Hoekstra talks about the genetic basis of evolutionary change in morphology and behavior. In her three-part talk, Hoekstra discusses how changes in an organism's DNA result in adaptations that allow the organism to better survive or reproduce in the wild. She uses wild mice in the genus *Peromyscus* (commonly referred to as deer mice) as a model system because they are found in large numbers in many different habitats and thrive in lab environments, providing many examples of adaptation to local environments.



Angelika Amon begins her talk by explaining what aneuploidy is and how it arises. She explains that autosomal aneuploidy is usually devastating to an organism, while aneuploidy at a cellular level may result in the unrestricted growth seen in cancer. In her laboratory, Amon uses budding yeast and mouse lines engineered to have specific aneuploidies to study gene-specific effects, cellular stress, and disease.

Did You Know…?

Important 2013 Annual Meeting Deadlines

The Call for Abstracts for the 2013 ASCB Annual Meeting in New Orleans, December 14–18, will be available online next month. Mark your calendars now for these important deadlines:

July 24	Member-Organized Special Interest Subgroup Application
July 30	Regular Abstract Submission *(for Minisymposium talk or poster consideration)*
September 4	Travel Award Application
September 4	Regular Abstract Submission *(poster consideration only)*
October 10	Early Meeting *Discounted* Registration
October 16	Late Abstract Submission

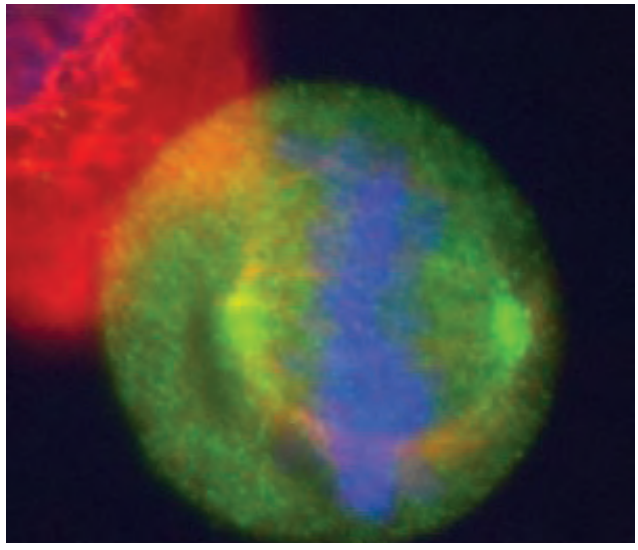
Visit the ASCB website—www.ascb.org/meetings—in early May for further details. ■

Cell Sightings

The Cell: An Image Library-CCDB (www.cellimagelibrary.org) continues to evolve. We are pleased to report that The Cell has now been accessed by users in 186 countries, with Angola being the latest addition.

Some interesting new or anticipated uses for images in The Cell include the following:

- An article by Maliga *et al.* titled, "A genomic toolkit to investigate kinesin and myosin motor function in cells" appeared in *Nature Cell Biology* 15, 325–334 (2013). This article references over 400 images that have been submitted to and will appear in The Cell. www.nature.com/ncb/journal/vaop/ncurrent/full/ncb2689.html.
- A review article titled "Corneal endothelium: developmental strategies for regeneration" has been accepted for publication in the journal *Eye*. The article uses the image CIL:10944 as Figure 1.
- There has been a request from the Broad Institute to store 7 TB of data from a large-scale screen. As more funding organizations make it a requirement to make data publicly accessible, it is expected The Cell will receive more such requests.
- The Cell received a request regarding use of images on covers of books published by Nova Publishing.
- The Astronomical Picture of the Day at NASA has contacted The Cell to implement the next installation of the Cellular vs. Celestial quiz.



This image is one of the group from the article by Maliga et al. *(see text). It is a fluorescence microscopy image of a HeLa cell at mitotic metaphase. The cell is stained to reveal DNA (blue), microtubules (red), and the C-terminal portion of the KIF2A protein (green), which is largely confined to the compact chromosomes. By* Zoltan Maliga et al. *This image is licensed under a Creative Commons Attribution License.*

Some important new developments include:

- A new feature has been installed: Project ID will make it easier to find related images.
- The next article in the tutorial series on Bitesize Bio came out recently. "The Cell: An Image Library-CCDB–Tutorial Part 3" begins the exploration of the Advanced Search feature and shows some tips and tricks on getting the most out of the website by easily and quickly finding just what you are looking for. Read more at http://microscopy.bitesizebio.com/articles/the-cell-an-image-library-ccdb-tutorial-part-3.
- Thomson Reuters now indexes the data in The Cell for its Web of Knowledge product.
- Images and videos from The Cell that meet the appropriate licensing requirements are now available in Figshare.

Many have signed up for a free account at The Cell. Have you? An account lets you save images in folders for future reference, and it takes less than a minute to set up: just go to www.cellimagelibrary.org/accounts/login_prompt. And don't forget that you can share images right from the detailed image page by using the buttons just below the licensing information. These buttons allow you to share images on Facebook, LinkedIn, StumbleUpon, and other social networks. Help promote The Cell by selecting and sharing just one image.

The Cell's Facebook page (www.facebook.com/cellImageLibrary) now has over 11,000 fans. Thank you! If you have not yet had a chance to join us, please do.

Want to join us on LinkedIn? Join our group for more conversation on everything microscopy related at www.linkedin.com/groups?about=&gid=3733425.

Have you used The Cell in interesting ways or in an article? Are you interested in submitting images or collaborating with The Cell-CCDB? Please let us know by sending an email to David Orloff at dorloff@ncmir.ucsd.edu. All documented usage helps support our efforts to obtain continued funding. ■

—David Orloff

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) for its day-to-day management. 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-CCDB.

Modern Cell Biology in Turkey: An Overview

This third article in our series regarding the ASCB initiative in Turkey offers more comprehensive information on Turkey's vast resources for research. Sercin Karahuseyinoglu and Deniz Yucel intend this piece to serve as a catalyst for budding and established researchers alike, on both sides of the Atlantic, to exchange ideas, take part in collaborative projects, or host visiting scholars. The first article (in the July 2011 issue of the *ASCB Newsletter*) has already resulted in some invitations. We would love to hear about, and help with, scientific contacts inspired by this work.

—Mahasin Osman for the International Affairs Committee

Located mostly on the Anatolian peninsula, Turkey bridges Asia and Europe. The inheritor of the great Ottoman Empire, this young republic has experienced rapid improvement in science and technology for the last 40 years.

Leadership Institutions

Since 1930, when scientific studies began here, Turkey has reached a high level of scientific achievement and has contributed to the global scientific enterprise by producing new scientists. Although innovative in its glamorous days, the Ottoman Empire left only one university and seven educational training facilities to the newly rising Turkish republic in 1923.[1] The first political efforts to formulate a detailed plan for science began in the 1960s, when the State Planning Organization (DPT) was established. The founding of the Scientific and Technological Research Council of Turkey (TUBITAK) was a milestone for all Turkish science.

In the 1980s, new arrangements came about in Turkish science and research. First was the reorganization of the universities by decree of the Council of Higher Education (YOK). In 1983, the Science and Technology High Council was established directly under the prime ministry, an important step for developing R&D policies. Establishment of the Turkish Science Academy (TUBA) and the Turkish Patent Institute in 1983 were further advances for Turkish science. DPT, TUBITAK, and TUBA have directed Turkish science and technology through project development and the establishment of new research facilities. Today these organizations operate under the authority of the Ministry of Science, Industry, and Technology and the Ministry of Development. With its administrative and financial autonomy, TUBITAK can advise the government in setting science and technology policies as well as provide grants for scientific projects, including those in cell biology.[1]

Universities

In Turkey, universities have been at the forefront of scientific endeavors almost since the beginning. Turkey has gone from having only a few universities in the mid-1960s to more than 150 today, spread across the country. Even though most are government sponsored, the fact that at least 60 are private institutions shows the increasing contribution of the private sector to Turkish scientific progress.

Research Types

Cell biology studies are carried out mostly in medical schools, veterinary faculties, faculties of science, and the affiliated biotechnology, applied science, and R&D institutes. Stem cell research offers hope for treatment of many degenerative diseases in Turkey and is a hot topic here. Human hematopoietic stem cells, human mesenchymal stem cells (e.g., from bone marrow, cord blood, umbilical cord matrix, adipose tissue), and cancer stem cells are typically studied most. Although Turkish law does not allow studies using human embryonic stem cells, it does permit those using cryopreserved stem cells (especially those from cord blood). Transplantation and tracking of stem cells in animals are among the most important projects.

Many labs in Turkey carry out research

METU BIOMATEN Center of Excellence in Biomaterials and Tissue Engineering

in cancer cell biology, plant cell biology, neurobiology, apoptosis, necrosis, tissue degeneration, cell line production, and cytotoxicity. Animal genetics and reproductive medicine techniques together with recombinant DNA and transgenic animal technologies have yielded cloning strategies in cows as well as methods for the production and freezing of animal embryos. Although Turkey has many in vitro fertilization centers, research on human embryos is forbidden.

The disciplines of biotechnology and biomedicine, molecular biology, biophysics and biochemistry, cell biology, genetics, and nanotechnology all can be brought to bear on the subjects mentioned above. Those research endeavors are leading to strategic technological studies in biotechnology, biomaterial sciences and tissue engineering, gene technologies, cellular therapies, and stem cell technologies. The goal of all such projects is to create cellular and genetic therapies to treat degenerative diseases. Thus, projects based on understanding molecular mechanisms and genetic inheritance and the manipulation of DNA, RNA, proteins, and antibodies garner increasing support.[2]

For studies that create original products, researchers can complete the paperwork for international patents through the Turkish Patent Institute. Many Turkish labs are also working on international accreditation programs.

Funding

Most universities have a scientific research project fund to support research activities and sometimes to support researchers; however, grants from universities are usually limited and small. Some programs in DPT (reorganized in the Turkish Ministry of Development) and TUBITAK offer grants.

Turkey has agreements with the European Union (EU) Framework Program as well as relationships with many other international organizations (see sidebar) that are involved in many kinds of research programs.[1] Although the exact amount of support allocated to cell biology projects is not available, government support for science and technology has increased substantially since 2005. Budgets for foundations for scientific projects, researcher training programs, advanced research centers, and central laboratories have increased almost sevenfold, reaching 1.8 billion Turkish liras (US$1 billion).

Support for Foreign Researchers

TUBITAK offers support for foreign researchers in several ways, including regional, international, and EU-bonded activities. Grants are available to students, postdocs, visitors, and scientific collaborators through many programs, such as the International Postdoctoral Research Scholarship Program, Visiting Scientists Fellowship Program, Co-Circulation

International Organizations Involved in Research in Turkey

European Cooperation in Science and Technology
European Research Coordination Agency
European Science Foundation
European Union Framework Program
International Council for Science
Ministerial Standing Committee on Scientific and Technological Cooperation
North Atlantic Treaty Organization
Organisation for Economic Co-operation and Development
Organization of the Islamic Conference
United Nations
United Nations Educational, Scientific and Cultural Organization

Organizations Involved in Cell Biology Research

Acibadem University
Akdeniz University
Ankara University
Biomaterials and Tissue Engineering Society
Ege University
Gazi University
Hacettepe University
Istanbul Cerrahpasa University
Istanbul Technical University
Karadeniz Technical University
Koc University
Kocaeli University Center for Stem Cell and Gene Therapies Research and Practice
Medical Biology and Genetics Society
METU BIOMATEN Center of Excellence in Biomaterials and Tissue Engineering
Middle East Technical University
Sabanci University
TUBITAK–Marmara Research Center
Turkish Biochemical Society
Turkish Histology and Embryology Association
Turkish Society for Electron Microscopy
Turkish Society of Anatomy and Clinical Anatomy

Scheme, Research Fellowships for Foreign Citizens (non-Turkish citizens accepted by Turkish universities or research institutes), and PhD Fellowships for Foreign Citizens (see www.tubitak.gov.tr). For those who want to work in Turkey, the International Researchers Coordination Committee, with members from several ministries and TUBITAK, works on regulatory issues for international researchers (see www.workpermit.gov.tr). Information about funding, grant and scholarship programs for incoming researchers, institutions participating in the EU 7th Framework and Marie Curie programs, and traveling and living in Turkey can be found at http://euraxess.tubitak.gov.tr, an international resource for mobile researchers.

Some government and private universities in Turkey also support foreign research projects (see sidebar). Some institutions listed have foreign students or scientists.

Scientific Publications

Turkey's output of scientific publications across all areas increased to 25,000 in 2009,[3] a threefold increase from 1998, catching up with dynamic countries such as South Korea.

The Thomson Reuters National Academic Network and Information Center database reports characteristics of articles originating from Turkey between 1981 and 2006.[2] According to this report, the top five branches of science, which account for almost 70% of all articles, are clinical medicine, chemistry, engineering sciences, physics, and biology and biochemistry. Molecular biology, genetics, plant and animal sciences, and material sciences ranked 6–10. Articles from Turkey's three largest cities—Ankara, Istanbul, and Izmir—constitute more than 60% of the total.[2]

When the sources of published materials are examined, government and private universities are found to account for over 90%. The leading contributors are Hacettepe University, Istanbul University, Ankara University, Middle East Technical University, and Istanbul Technical University. Although other universities contribute about 40%, they are only 20–25 years old, so their output is likely to increase and, along with it, Turkey's rank as a producer of scientific information. Universities in Istanbul and Ankara lead in production of papers in cell biology, biochemistry, molecular biology, and genetics.[2]

Collaborations

Collaboration is common between Turkish universities and those abroad. Because many Turkish researchers hold or have held positions in foreign institutions, joint or multicenter projects are often possible.

Conclusion

Turkey encourages scientific and technological development to the highest levels. Recent advances target innovative technologies that will improve the quality of life and translate newly obtained knowledge into products, processes, and services to benefit the country and humanity.[4] Cell biology studies in Turkey take part in this continuous advancement of science and technology as well. Recent and forthcoming results on stem cells, molecular biology, genetics, neuroscience, and cancer biology show great promise. ■

—Sercin Karahuseyinoglu, Suleymaniye Gynecology, Maternity and Children's Diseases Education and Research Hospital, IVF Clinics, Istanbul, Turkey; Deniz Yucel, Acibadem University School of Medicine, Department of Histology and Embryology, Istanbul, Turkey

References

[1]http://www.turkcebilgi.com/ansiklopedi.

[2]Demirel IH, Sarac C, Akilli E, Buyukcinar O, Yetgin S, Gurses EA (eds)(2008). *Scientific Publication Map of Turkey.* Ankara, Turkey: TUBITAK-ULAKBIM. 2008. ISBN-13: 978-975-403-448-6.

[3]http://euraxess.tubitak.gov.tr.

[4]National Science and Technology Policies: 2003–2023 Strategy Document, November 2004, TUBITAK.

MAC Offers Junior Faculty and Postdoc Career Development Workshop

Attendees at the 2012 ASCB MAC Junior Faculty and Postdoctoral Fellows Career Development Workshop

Whether you're looking to establish your academic career or know someone who is, please share the news: The ASCB Minorities Affairs Committee (MAC) is accepting applications for the ASCB MAC Eighth Annual Junior Faculty and Postdoctoral Fellows Career Development Workshop. The workshop is scheduled for June 15–16, 2013, in Chicago, IL. Applications are due May 3, 2013.

The workshop is open to junior faculty and postdoctoral fellows who are interested in careers at research-intensive or teaching institutions. A limited number of travel awards are available for members of underrepresented groups in the sciences, members of disadvantaged populations, and faculty (regardless of ethnicity) at minority-serving institutions.

Plenary and breakout sessions will cover areas including:

- Getting the job
- Professional conduct
- Lab set up and management
- Grantsmanship
- Mentorship
- Ethics/conflicts of interest
- Writing
- Tenure

The workshop and the travel awards are supported by a Minority Access to Research Careers grant from the National Institute of General Medical Sciences, National Institutes of Health, to the ASCB.

For more information and to apply for the workshop and/or related travel awards visit, www.ascb.org/Junior-Faculty-Workshop.html.

Questions? Contact Deborah McCall, Senior Manager, Minorities Affairs, by email at dmccall@ascb.org or by phone at 301-347-9323. ■

ASCB Annual Meeting Travel Awards

ASCB has budgeted more than $140,000 for travel awards to the 2013 Annual Meeting. Awards are available to cover childcare expenses and for travel to the meeting by junior faculty, postdocs, students, and minority scientists. Applications will be accepted beginning May 1 at ascb.org. ■

HIGHLIGHTS from *MBoC*

The Editorial Board of *Molecular Biology of the Cell* has highlighted the following articles from the March 2013 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.

Slk19 clusters kinetochores and facilitates chromosome bipolar attachment
Daniel Richmond, Raed Rizkallah, Fengshan Liang, Myra M. Hurt, and Yanchang Wang

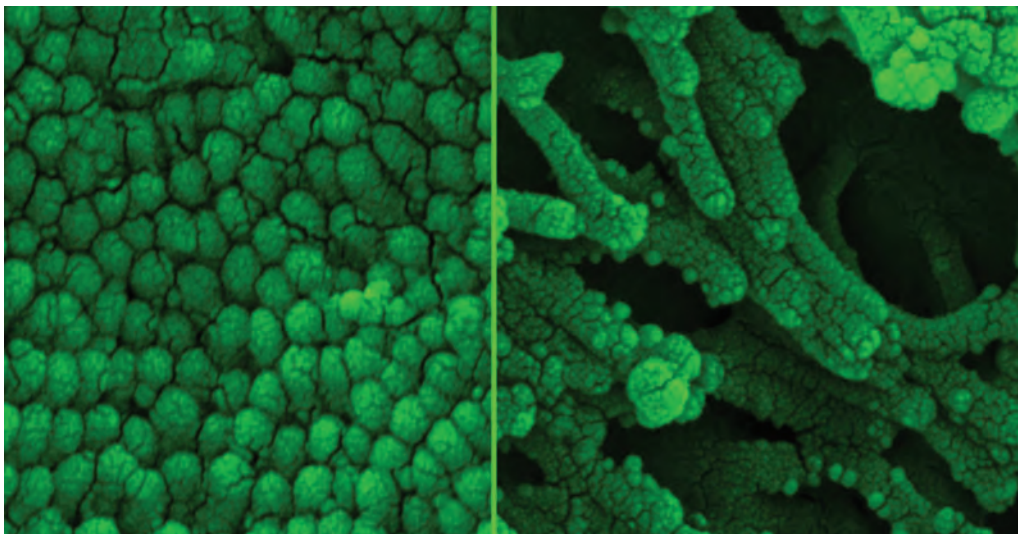
Yeast kinetochore protein Slk19 is required for kinetochore clustering, and exposure of *slk19* mutant cells to nocodazole causes impaired kinetochore capture and delayed chromosome bipolar attachment after nocodazole washout.
Mol. Biol. Cell 24 (5), 566–577

Rab1b overexpression modifies Golgi size and gene expression in HeLa cells and modulates the thyrotrophin response in thyroid cells in culture
Nahuel Romero, Catherine I. Dumur, Hernán Martinez, Iris A. García, Pablo Monetta, Ileana Slavin, Luciana Sampieri, Nicolas Koritschoner, Alexander A. Mironov, Maria Antonietta De Matteis, and Cecilia Alvarez

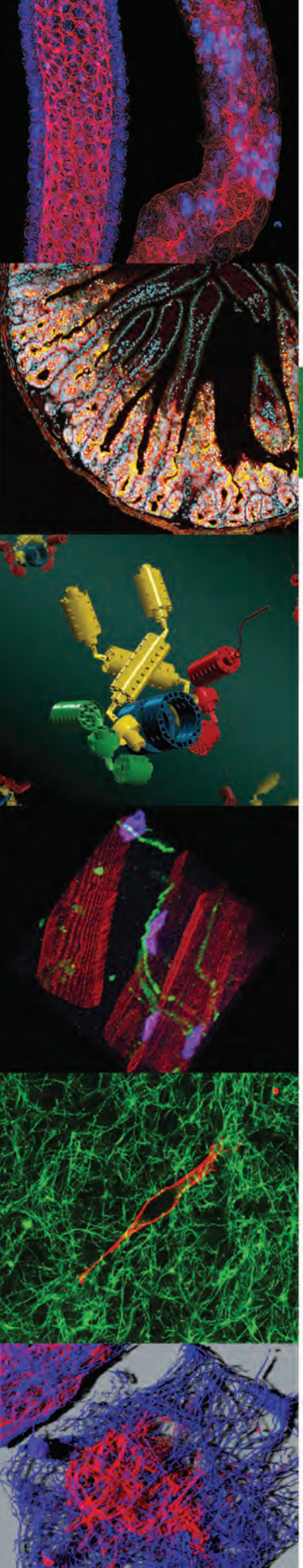
An increase in Rab1b levels induces changes in Golgi size and in gene expression. These Rab1b-dependent changes require the activity of p38 mitogen-activated protein kinase and the cAMP-responsive element binding protein consensus binding. The results show a Rab1b increase in secretory cells after stimulation and suggest that this increase is required to elicit a secretory response.
Mol. Biol. Cell 24 (5), 617–632

Rab11-family interacting proteins define spatially and temporally distinct regions within the dynamic Rab11a-dependent recycling system
Nicholas W. Baetz and James R. Goldenring

The Rab11-family interacting proteins (Rab11-FIPs) facilitate Rab11-dependent vesicle recycling, yet it is unknown how these effectors cooperate with each other during recycling. It is found that Rab11-FIPs exhibit selective cooperation along dynamic tubular compartments to fill distinct spatiotemporal roles during recycling.
Mol. Biol. Cell 24 (5), 643–658 ■



The scanning electron micrograph on the left shows the tight packing of apical microvilli in Caco-2 cells polarized on permeable filters. In contrast, Caco-2 cells with shRNA-mediated knockdown of Rab25 (right image) show altered brush border microvilli, loss of dense packing, and aberrant microvillar length as well as the presence of vesicular buds along the microvillar shafts. See Mol. Biol. Cell *24, 818–831. (Image:* Moorthy Krishnan, Byron Knowles, *and* James R. Goldenring, *Epithelial Biology Center, Vanderbilt University School of Medicine)*



MBoC

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Check out the new features on our website: articles usage statistics, figures downloadable in PowerPoint, social bookmarking, and more!

www.molbiolcell.org

GRANTS & OPPORTUNITIES

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

Collaborations for Macromolecular Interactions in Cells (R01) and Research Networks for Macromolecular Interactions in Cells (U54). The National Institute of General Medical Sciences (NIGMS) is seeking applications for grants to establish interdisciplinary collaborative projects to advance studies of macromolecular interactions and their relationship to function in cells. NIGMS invites applications involving unconventional research strategies, including exploratory, descriptive, and statistical approaches, and encourages discovery and hypothesis generation as research objectives. Letters of intent due April 30, 2013; applications due May 30, 2013. http://grants.nih.gov/grants/guide/rfa-files/RFA-GM-14-004.html; http://grants.nih.gov/grants/guide/rfa-files/RFA-GM-14-005.html.

Mechanisms of Cellular Immunity in the Female Reproductive Tract (R01). The National Institute of Allergy and Infectious Diseases is seeking applications for grants to stimulate research focused on the discovery of mechanisms that mediate effective antigen-specific memory T cell responses in the female reproductive tract (FRT). The ultimate goal is to develop the knowledge base needed to develop future vaccines that elicit effective and durable T cell responses against infection by HIV and other viral pathogens in the FRT. These grants are intended to support innovative basic research efforts and are not intended to support the preclinical or clinical development of vaccine candidates or adjuvants. Investigators with the appropriate expertise, but not currently in the HIV field, are encouraged to apply. Letters of intent due June 24, 2013; applications due July 24, 2013. http://grants.nih.gov/grants/guide/rfa-files/RFA-AI-12-054.html.

NIH Director's Biomedical Research Workforce Innovation Award: Broadening Experiences in Scientific Training (DP7). The purpose of the National Institutes of Health (NIH) Director's Biomedical Research Workforce Innovation Award: Broadening Experiences in Scientific Training (BEST) program is to seek, identify, and support bold and innovative approaches to broaden graduate and postdoctoral training, such that training programs reflect the range of career options that trainees (regardless of funding source) ultimately may pursue and that are required for a robust biomedical, behavioral, social, and clinical research enterprise. Collaborations with nonacademic partners are encouraged to ensure that experts from a broad spectrum of research and research-related careers contribute to coursework, rotations, internships, or other forms of exposure. This program will establish a new paradigm for graduate and postdoctoral training; awardee institutions will work together to define needs and share best practices. Letters of intent due April 10, 2013; applications due May 10, 2013. http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-12-022.html

Planning Grants for the NIH Building Infrastructure Leading to Diversity Initiative (P20). The National Institutes of Health (NIH) encourages institutions with expertise and innovative strategies for developing research and mentoring opportunities for undergraduate students from backgrounds underrepresented in biomedical research to submit applications for six-month planning grants for the NIH Building Infrastructure Leading to Diversity (BUILD) initiative. The BUILD initiative aims to increase the diversity of the NIH-funded workforce by supporting collaborative programs that include novel approaches for enhancing undergraduate education, training, and mentorship, as well as infrastructure support and faculty development to facilitate those approaches. BUILD planning grants are intended to help institutions develop the necessary partnerships and infrastructure needed to be competitive for the BUILD initiative. Letters of intent due April 10, 2013; applications due May 10, 2013. http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-13-001.html.

Planning Grants for the NIH National Research Mentoring Network (P20). The National Institutes of Health (NIH) encourages organizations with experience in the mentorship of individuals underrepresented in the biomedical research workforce to submit planning grant applications for the NIH National Research Mentoring Network (NRMN). The NRMN will establish a nationwide consortium to provide networking and mentorship experiences for individuals from backgrounds underrepresented in biomedical research from the undergraduate to junior faculty level. Planning grant applications must propose a plan to develop the partnerships and infrastructure needed to be competitive for the NRMN initiative. Letters of intent due April 10, 2013; applications due May 10, 2013. http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-13-002.html. ■

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

In Memoriam: Ellen R. Dirksen

The first elected chair of the Women in Cell Biology (WICB) committee, Ellen R. Dirksen, professor emeritus in Neurobiology at the University of California Los Angeles (UCLA) David Geffen School of Medicine, died on January 5. Dirksen, who joined the ASCB in 1962, was elected the Committee's first officer during the 1983 Annual Meeting.

Writing in the September 1984 issue of the *ASCB Newsletter*, Dirksen declared that, "It is now beginning to be possible, for the first time in history, for relatively large numbers of women to consider freely a future in science without feeling that the choice is an extraordinary one. And yet we still need, for those of us in the process, a sense of community. For this reason, the decision was made to establish a more formal role for the WICB."

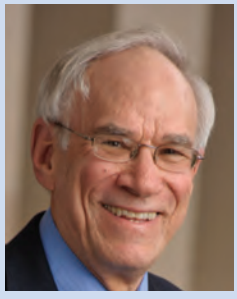
Dirksen earned her BS in zoology at the University of Arizona, Tucson, in 1949 and her PhD in zoology at the University of California (UC) Berkeley in 1961. She taught at UC San Francisco until moving to UCLA in 1974. She became a full professor at UCLA in 1982. Her research centered on the role of Ca^{2+} intercellular signaling in epithelial tissue in the tracheal airway.

The ASCB extends condolences to her family, friends, and colleagues. ■

Ellen R. Dirkson

MEMBERS in the News

Daniel Kiehart, of Duke University, an ASCB member since 1980, has been appointed dean of the Natural Sciences Division within Trinity College of Arts & Sciences, effective July 1.



Frederick Grinnell, of the University of Texas Southwestern Medical Center, Dallas, an ASCB member since 1972, was elected a Fellow of the American Association for the Advancement of Science.

MEETINGS Calendar

A complete list of upcoming meetings can be found at http://ascb.org/othermeetings.php. The following meetings were added since the last issue of the Newsletter:

April 27, 2013. Birmingham, AL
Developing a Graduate Level Blueprint for a STEM Life: Cell Biology and More (an ASCB Local Meeting). https://services.medicine.uab.edu/electronicpayments/Registration.asp?EventID=68.

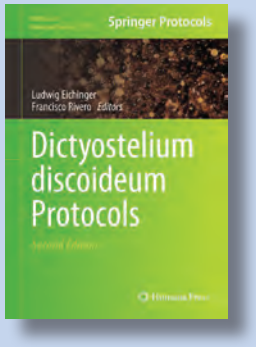
May 6–10, 2013. Indianapolis, IN
2013 O'Brien Workshop on Applied Microscopy in Kidney Research. http://medicine.iupui.edu/nephrology/obrien/Workshops.html.

June 24–26, 2013. Vancouver, Canada
2013 Ion Channel Retreat. www.aurorabiomed.com/ion-channel-retreat-2013.htm.

ASCB Annual Meetings

December 14–18, 2013.
New Orleans
December 6–10, 2014.
Philadelphia
December 12–16, 2015.
San Diego
December 3–7, 2016.
San Francisco

BOOKS by Members



Dictyostelium discoideum Protocols, eds. Ludwig Eichinger and Francisco Rivero, published by Humana Press, ISBN 978-1-62703-301-5 ■

ASCB Member Comments

We welcome your comments and suggestions at **ascbinfo@ascb.org** ■

The ASCB 2013 Call for Nominations

Merton Bernfield Memorial Award

Who is Eligible: An outstanding graduate student or postdoctoral fellow (at the time of nomination) who has excelled in research.

How to Apply: The student or postdoc or his or her advisor should submit a one-page research statement, a CV, a list of publications, a copy of the abstract submitted to the current year's Annual Meeting, and the advisor's letter of recommendation. Postdocs may also submit the recommendation of their graduate student advisor. Duplicate applications from graduate students may be submitted for the Gilula and Bernfield Memorial Awards. Nominators must be ASCB members.

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

Deadline: July 15 (electronic submission preferred to Cheryl Lehr at clehr@ascb.org)

Norton B. Gilula Memorial Award

Who is Eligible: An outstanding graduate or undergraduate student (at the time of nomination) who has excelled in research or first-year postdocs whose work was performed while a PhD or MD/PhD student.

How to Apply: The student or advisor should submit a one-page research statement, a CV, a list of publications, if any, the abstract submitted to the current year's Annual Meeting, and the advisor's letter of recommendation. Duplicate applications from graduate students may be submitted for the Gilula and Bernfield Memorial Awards. Nominators must be ASCB members.

Awards: The winner is presented a plaque and a ribbon for his/her poster board. Expenses to attend the Annual Meeting are paid. Funded by an annual grant from Rockefeller University Press.

Deadline: July 15 (electronic submission preferred to Cheryl Lehr at clehr@ascb.org)

Electronic submission is preferred, but for those awards that accept nominations by mail, they may be sent to:
The American Society for Cell Biology
8120 Woodmont Avenue, Suite 750
Bethesda, MD 20814-2762, USA

For names of prior awardees or more information, visit www.ascb.org and click on "Membership" or contact the ASCB at 301-347-9300 or ascbinfo@ascb.org.

ASCB 2013 Member Gifts

The ASCB is grateful to the following donors* whose contributions support Society activities:

Gold ($1,000 and up)

Bruce Alberts
Huntington Sheldon

Bronze ($250-$499)

Sue Biggins

Sustainer (up to $249)

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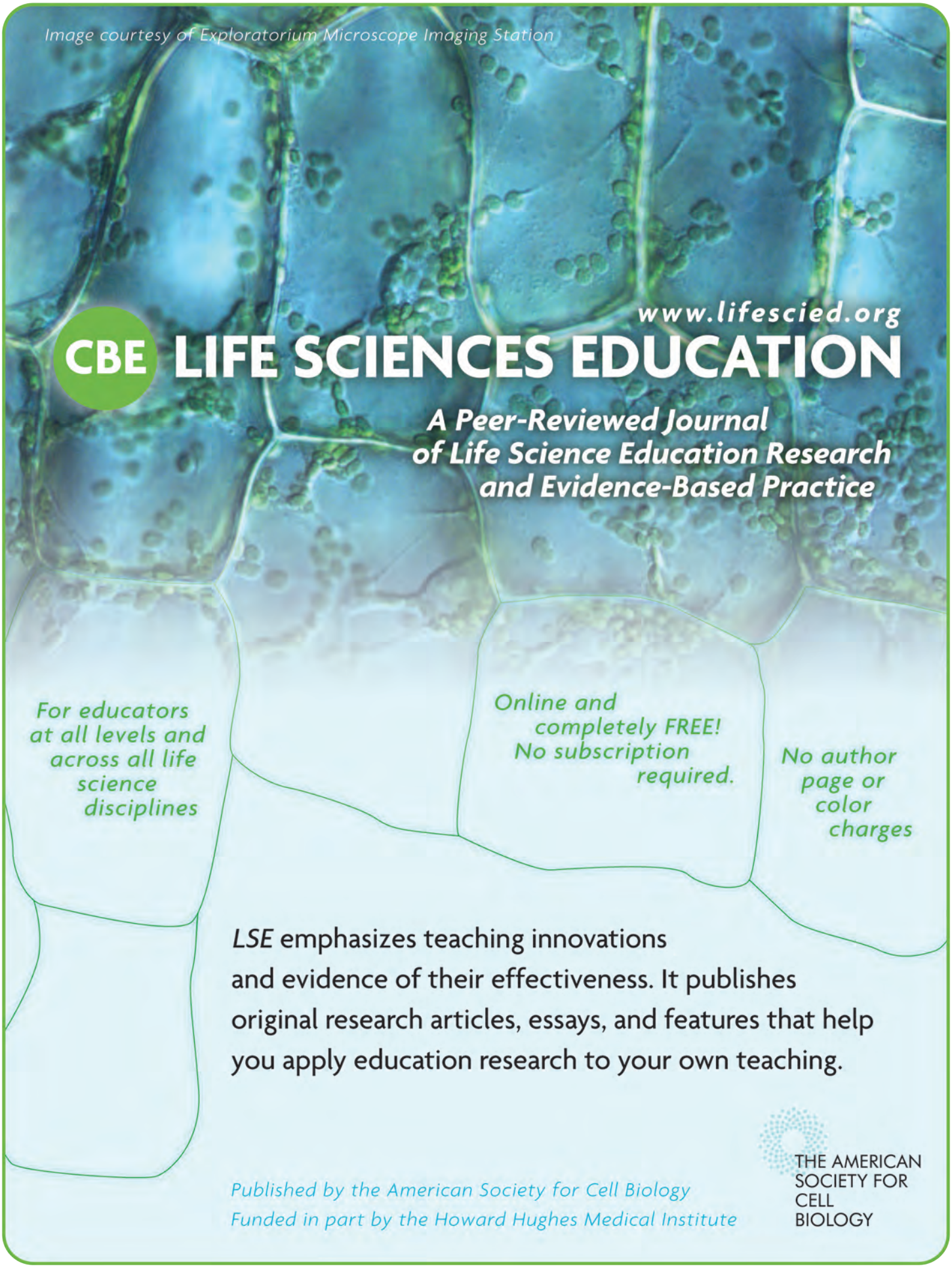
*as of Feb 28, 2013



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THE AMERICAN SOCIETY FOR CELL BIOLOGY

DEAR Labby

A Community That Attests to the Central Importance of Cell Biology

Dear Labby,
I am a postdoc and recently met an ASCB member at a meeting. I sat next to him at dinner and he asked me a lot of questions about my research but then, out of nowhere, he brought up the subject of ASCB. I said that I had been a member a few years ago when I attended the ASCB Annual Meeting but didn't rejoin. This guy was very persuasive that I should get back into ASCB. But this encounter made me think, why was this ASCB member so quick to turn to this "recruitment"? I must say, it was a nice experience, but it made me wonder if ASCB is as visible as it should be, especially for us younger cell biologists. When I told my lab mates about this discussion, one of them said "Why don't you tell Labby that ASCB needs to get the word out that they are there for us." I asked my lab mate, "What is Labby?" He told me. So here I am. Can you help us cell biology students and postdocs better understand why being a member of ASCB could be good for us? Oh, by the way, I have rejoined.

—Back in the ASCB

Dear Back in the ASCB,
Thank you for rejoining! Your experience of joining ASCB when planning to attend an Annual Meeting but not feeling an incentive to rejoin is familiar and painful to ASCB leaders, and emphasizes that the Society must do a better job of explaining why being a member means so much more than enjoying a reduced registration fee at the Annual Meeting. Although there are many great benefits beyond that, it may surprise you to know that Labby believes that the most compelling reason for being an ASCB member is to be part of a "community of attestation."

Yes, that's a weird-looking term, but it means that everyone in ASCB attests that basic research at the cell level, as well as beneath at the molecular and above at the tissue and organ levels, holds the promise to unlocking new insights into the nature of life. "Attestation" means that we in ASCB have sufficient credentials, both as individuals and as a community, to throw down the gauntlet and say, with powerful conviction, that we have reason to believe our course of scientific inquiry is the best and brightest path. To attest such a claim is a bold thing. But it has a redeeming feature: the claim is true. Other fields of inquiry can play a catalytic role in biology and medicine, but there can be no doubt that cell biology lies at the center. Cell biology is the enabling science for biology and medicine, and cells are the essential players in the theater of the organism, where their properties can most incisively be understood and brought forth.

There are many perquisites you will get from rejoining ASCB, including ones sharply honed to your needs, such as opportunities for networking and career development. These are practical benefits and very important. But such pragmatic reasons for rejoining ASCB share center stage with the noble purpose of coming back into a community that believes what Labby has stated above. The central role of cell biology is a powerful concept that needs to be known and disseminated. You can help all of us in ASCB get this message across. And at what better time? Recent conceptual and technological advances in our field give so much cause for optimism that major breakthroughs are within our reach.

These are the reasons you are to be congratulated for rejoining ASCB. ■

—Labby

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. ■

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