PRESIDENT'S Column

ASCB's Business: Raising Awareness and Discussing Issues

Exciting details about the upcoming Annual Meeting in Denver this December are unveiled throughout this issue. As always, our members have risen to the occasion, and the meeting will be jump-started with 16 timely Member-Organized Subgroups on Saturday afternoon.

Mark Kirschner's Keynote address promises to be inspiring. The abstracts submitted for Minisymposia and posters describe important new findings you'll want to hear about. Look for the clear threads that indicate sessions within the meeting more focused on specific areas of cell biology.

Sandra Schmid

At each morning Symposium, top scientists will deliver highlights from their research and their vision of cell biology at progressive scales. You'll be further inspired by the scientific and leadership accomplishments of our E.B. Wilson, Porter, E.E. Just, Bruce Alberts, and Public Policy Awardees/Lecturers. The number of networking opportunities and venues has been increased, facilitated by the unique design features of Denver's new convention center. This is a meeting you won't want to miss!

Buried in the busy, science-centric program is an often poorly attended, "ASCB Business Meeting and Town Hall," mandated by the ASCB Bylaws. I hope that many of you will break with tradition and attend this session; we'll quickly dispense with the necessary business (most importantly, passing the President's gavel on to Ron Vale). We'll use the bulk of this session to hold a "conversation" around issues important to all of us. I hope that we can also generate ideas that can help to strengthen our community and our scientific enterprise. Here are three such issues we could discuss. Let me know if you have others.

How Can We Ensure That Equal Contributions Are Equally Recognized?

As science becomes increasingly interdisciplinary and team-oriented, the number of co-first author papers is increasing. For example, work in my lab frequently involves close collaborations between a cell biologist (Smith) and a mathematician/computational biologist (Jones). The resulting paper could not have been produced without equal contributions from both, and yet, despite this, one author must be listed first. The decision of order can become a matter of contention and a barrier to collaboration. Our postdocs and students believe that, regardless of the asterisks indicating equal contributions, the person listed first will get more credit. And, sadly, they are justified in this belief because the paper will be cited as Smith et al., rather than Smith, Jones, et al. in subsequent publications. The running title will also only list the first author. Moreover, whereas on our CV an asterisk clearly indicates equal contributions, no such asterisk currently appears in the bibliography section at the end of published papers or in PubMed citations. Identification of co-first authors can only be gleaned from the full html or pdf. So is "equal contribution" being equally recognized in publications? The answer, sadly, is no! The first rule for building effective teams is to ensure shared credit; thus, this situation is antagonistic to collaborative research, especially among young scientists.

One would think that the problem could be easily remedied in this age of metadata and computer scripts. For example, might it be possible to include information regarding co-first authorships and perhaps co-corresponding authorships in the metadata during the submission/publication process? Couldn't the Style Outputs of citation managers like Endnote be changed to automatically recognize this metadata to cite co-first author papers as Smith, Jones, et al. and add asterisks to the bibliography list?

I have discussed the issue with the administrators of PubMed, who in turn took the matter to the International Committee of Medical Journal Editors (ICMJC). Their search of approximately 10,000 PubMed

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Central references identified only 0.8% as having co-first authors. Thus, at this point they did not perceive a need for action. However, the PubMed administrators had difficulty defining this parameter, and I wonder whether these statistics underestimate the magnitude of the problem, especially in specific areas of research such as cell biology. In my own work, five of my last 20 papers have required co-first authored, collaborative efforts, and I see this percentage increasing. Therefore, in the meantime, I'm careful to be specific when I discuss our work and write recommendation letters, making sure that equal credit is given to collaborative team members.

What's your opinion? How much of a problem is this? How can or should the ASCB contribute to a solution?

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NIH Study Sections: Should Cell Biologists Play the Numbers Game?

To its credit, the U.S. National Institutes of Health (NIH) Center for Scientific Review is constantly evaluating Study Sections in an effort to ensure fair peer review and the equitable distribution of submitted applications. NIH peer review is a thankless task. We should be grateful to the NIH administrators and our colleagues who serve on Study Sections. And I'd like to acknowledge the work of Toni Scarpa, CSR's director, upon his retirement from that position.

Unfortunately, with paylines in the 10-15% range or lower, the meritocratic system of peer review cannot succeed. It is simply impossible to distinguish between "exceptional' and "outstanding" applications, and many in the latter class will fall outside the payline. Based on the recent U.S. congressional and White House battle over budget deficits and debt ceilings, it seems unlikely that needed increases in NIH funding are imminent. NIH directors will need to look carefully at every dime spent and shift funds from less-effective programs to increase the funding levels of R01 grants, the proven mainstay of innovative research.

In the meantime, grants proposing basic research (or as Paul Nurse better describes it, "discovery research") in cell biology are largely being funneled into one of only three NIH Study Sections: Membrane Biology and Protein Processing, Nuclear and Cytoplasmic Structure/Function and Dynamics, and Cell Signaling and Regulatory Systems. Hence the best cell biology discovery research competes head-to-head with itself. At the same time there are individual Study Sections focused, for example, on specific aspects of cell biology, including "Cell and Molecular Biology of Glia," "Cell and Molecular Biology of the Kidney," "Cell and Molecular Biology of Neurodegeneration," "Cellular Mechanisms of Aging," "Molecular and Cellular Endocrinolgy," and "Molecular and Cellular Hematology." There are also five Study Sections on "Macromolecular Structure and Function." How are these distributions determined? The answer is: by the number of grants submitted. As cell biologists, we tend to focus on our cherished projects, diligently collecting preliminary data, polishing our submissions and then, almost inevitably, doing additional experiments to shore up our revised proposals. I spent three months working on my last grant proposal. Many of our colleagues in other fields simply submit more grants. I know several who submit two or three grants in each round, letting the referees decide which project they'll ultimately pursue. Shorter grants and modular R01 budgets are amenable to more focused, circumscribed proposals, making this an even more attractive strategy. More grants, more Study Sections. Of course, there are unintended consequences from this strategy. Writing more grants puts additional burden on the peer-review system. Without an increase in funds, the percentage of grants funded would be driven down even further. Perhaps the NIH should track, and maybe limit, the number of applications/PI.

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In the meantime, we (the ASCB) and others are advocating for more cell biology Study Sections. We have further argued that the situation and science would be improved by including basic cell biologists on other review panels and incorporating more basic cell biology research into clinically oriented Study Sections. Take a look at the scope of grants reviewed in these other Study Sections and their composition. If you're submitting an application to NIH, you need to make strategic decisions as to where best to target your research and application.

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Open Access Isn't Free

PLoS One has revolutionized the business model of open-access publication. It will publish papers in all areas of science and medicine provided that they are judged technically sound. According to the *PLoS* Editorial Policy "Judgments about the importance of any particular paper are then made after publication by the readership (who are the most qualified to determine what is of interest to them)." The cost of publication in the *PLoS* online-only journal is a flat fee of $1,350. According to the Web of Knowledge, in 2010, the journal published nearly 14,000 articles. If you do the math, you'll see that *PLoS* is making good money, used, in part, to support other, more selective, open-access *PLoS* journals. My hat's off to *PLoS* for creating this new business model, for facilitating scientific communication in this way, and for continued leadership in open-access publication.

By contrast, *Nature* and its sister journals refuse to open their contents to the general population, and Cell Press journals do so only after one year. However, recently both have launched open-access journals. *Nature Communications* and *Cell Reports* are online only, open-access journals that will publish high-quality papers across all scientific disciplines. I may be cynical, but it seems to me that this decision might be based more on the prosperity of *PLoS One* and a desire to capture some of that market, than a sudden change in heart regarding the merits of open access. Moreover, the cost of publishing in these two online-only journals is $5,000 per article! By contrast, the cost of publishing in *Molecular Biology of the Cell*, which is also online only, and open access after two months, is $140/page (ASCB members pay 20% less). In these times of fiscal austerity, is it responsible to pay $5,000 for open access, which should be the norm? That represents more than one-third of my average annual supply budget per person. We frequently pay more for brand-name products than their generic counterparts, not because they're necessarily better, but because of "branding." Are scientists paying too much for the *Cell* and *Nature* "brands?"

I hope you'll drop by the ASCB Business Meeting and Town Hall in Denver, held Tuesday, December 6, 2011, at Noon. Bring your ideas and concerns, and let's have a discussion about these or other issues important to our community of cell biologists. ■

Comments are welcome and should be sent to president@ascb.org.

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