

By the scientists, for the scientists

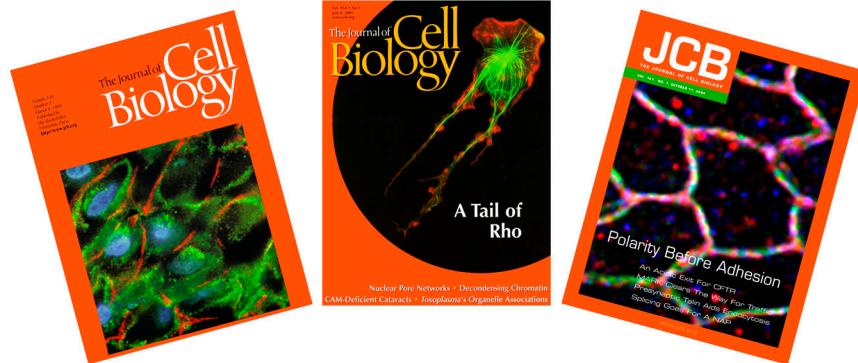
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My association with the *JCB* began very early in my scientific career. In fact, it predated my understanding that there would even be a scientific career. In the mid-1970s while still an undergraduate, the *JCB* published my very first paper, a contribution noted perhaps less so for its reporting the characterization of the first known protein in plant cell walls than for a footnote that called attention to the evolutionary conservation of a relationship between "sex and slime" throughout the plant and animal kingdoms.

Some years later, while a junior faculty member at Yale, I was invited to join the *JCB* Editorial Board by the journal's then Editor-in-Chief, the late Bernie Gilula, who was head of cell biology at Scripps. After serving a couple of terms I "retired," only to be recruited once again by Bernie, this time to serve as one of the journal's senior editors. Within months, I was asked by my fellow senior editors to accept the post of Editor-in-Chief. Bernie was stepping down after a long tenure at a time of transition at the Rockefeller University, a new President (Arnie Levine) having just been appointed. Because New Haven was close to New York, and because I was a Rockefeller expatriate, I was viewed as being in an optimal situation to serve as liaison. I accepted the position for one year.

One year became two, then three, and now it is 10. It became clear early in my tenure that there were tumultuous times ahead for scientific publishing with the advent of the "open access"



Three different designs of the *JCB* during the last 10 years.

movement, the development of online publishing, and the aggressive expansion of large commercial publishers, a development that has increasingly consolidated the control of scientific communication in the hands of for-profit corporations. It is not that these developments were necessarily bad (e.g., making scientific information more accessible to the public), but they did individually and collectively present a challenge to the *JCB*'s model of a not-for-profit journal run by and for scientists. This is a model that has no agenda other than a commitment to providing the highest quality and most influential forum for scientific exchange in the increasingly broad field of cell biology.

Those dozens of us who have served the journal over the years believe the way to accomplish the *JCB*'s mission is to favor substance over style, to rely on practicing scientists as editorial arbiters, and to operate a peer-review process that is rigorous but fair, consistent, and logical, with the goal of treating every submission as we would hope to have our own submissions handled. These basic tenets have served the *JCB*, and the scientific community, exceedingly well since the journal's inception,

establishing the *JCB* as a prestigious "journal of record" in the broad field of cell biology. However, things do change, with the events of the last decade having revolutionized the landscape of scientific publishing and communication. The *JCB* also had to change to protect its very survival as a major journal in a competitive environment of "name brands" run by multinational publishers with deep pockets. Where there was once just the *JCB* and *EMBO Journal* (both scientist-run not-for-profits), there is now *Nature Cell Biology*, *Developmental Cell*, *Molecular Cell*, and *Current Biology* that have joined the competition for excellent papers—and citations—in cell biology.

What did we do to adapt? When I began as Editor-in-Chief, I inherited a journal with a stellar reputation for excellence, but also one that was rather staid, conservative, and relatively narrow in scope. It was also operationally inefficient, with most of the community (rightly) feeling that our publication

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process was slow and frustrating. Led by Mike Rossner, who was then Executive Editor (now Director of The Rockefeller University Press), we revamped our procedures, continued the process of centralizing editorial operations in our New York office, initiated a new rapid publication route (*JCB Reports*), and concentrated decision making and reviewing to the senior editors and editorial board members. Review times now are the best in the business, below 30 days for a first decision, 3 days for editorial rejections, and less than a month from time of acceptance to time of “official” publication. We also decided to make the online version rather than the paper version of the *JCB* the actual “journal of record”—the first journal to do so. We now provide exemplary service to the community with our excellent staff of professional editors (led by Emma Hill and Aimee deCatheleineau) providing superb and efficient support to our scientist-editors, and increasingly serving with Mike as the journal’s public face. I believe having such a public face is essential to ensure the *JCB*’s visibility to prospective authors. Although *JCB* editors are almost always in attendance and major participants in any significant meeting anywhere in the world, they attend as scientists first and editors second (or third). Emma, Aimee, and Mike and their team increasingly ensure that the *JCB*’s interests are represented.

We broadened the scope of the journal’s content, now spanning the breadth of cell biology more effectively. We added a few but highly successful features to the “front material” of the journal to better highlight our content. We turned over nearly 50% of the senior editors to provide better scientific, geographic, and gender balance.

We have led the movement for public access to scientific content. Years before the advent of PLoS, we were the first major journal to release for free all of its content six months after publication (Hill, 2007). We have also pioneered the application of “Creative Commons” licensing to the content of a subscription-based journal—*JCB* readers can freely reuse any of the journal’s content for noncommercial purposes (Hill and



Ira and his dog Sophie on a hike in Acadia National Park.

Rossner, 2008). We took our responsibilities as public advocates quite seriously in these matters. I still find it difficult to understand, however, why organizations such as the Howard Hughes Medical Institute (HHMI) decided to pay profitable commercial publishers for providing these services, which we had long provided for free (Rossner and Mellman, 2007). This was not, and is not, helpful to the cause of public access. Perhaps with the recent leadership change at HHMI, this situation will also change.

Another challenge that emerged following the move to electronic work flow was data integrity, an issue that had not been adequately addressed by the scientific community and largely ignored by publishers and journals. Again taking a public advocacy role, we developed standards for data representation (Wade, 2006), communicated them, and began routinely screening all accepted manuscripts for inappropriate manipulations of digital image data, years before the Hwang case broke; our procedures would have detected anomalies in this rather infamous stem cell paper (Rossner and Yamada, 2004). Similarly, our new *JCB DataViewer* module allows readers to examine digital microscopy files as if they were their own, further enabling scientific communication of 3D information using 2D media (Hill, 2008).

How have we done? Our reputation appears intact, our submissions continue to rise, and our acceptance rate continues to fall (currently at an incredibly selective $\sim 15\%$). We have seen a slight downward drift in that famously bogus metric, the “Impact Factor,” most likely because of the increased competition for a limited number of papers in our field, and because the *JCB* has been unwilling to game the system as have others by severely limiting the number of papers published, providing a steady stream of easily citable reviews, and perhaps even adjusting the actual data *ex post facto*. For example, the *JCB* publishes more papers per year than *Nature Cell Biology* and *Developmental Cell* combined, increasing our all important “denominator” by 2.5-fold. We engaged Thomson Scientific on these issues last year rather publicly, and their response was as insubstantial and inaccurate as their metric (Rossner et al., 2007, 2008). Yet, many scientists are influenced by impact factors, as well as by name branding, because we scientists have allowed such matters to influence hiring, promotion, and granting decisions. If we allowed ourselves to be influenced by quality as determined, for example, by the half-lives of citations, *JCB* (at 8.8 years) would be at the top of the list, ahead of *Cell*, *Nature*, and *Science*. Papers that

are influential are those that continue to be cited for years!

What can we do? The *JCB* will and must increase its visibility and desirability by playing to our inherent strengths: the commitment and support of a large cadre of dedicated scientist-editors, authors, and readers. We remain one of the very last major journals that truly is run by scientists for scientists, which means that in the end, our interests are wholly aligned with the community we serve. Our editors are the ones who (during their “day jobs”) set scientific agendas, organize meetings, make hiring decisions, and review each other’s grants and papers. We cannot bequeath these responsibilities to others, which is effectively what happens if we allow ourselves to chase impact factors in making decisions about publication, hiring, and the like.

But, challenged by the increased competition, the *JCB* must respond and not just complain. We need to continue improving our content and its presentation; this is the positive aspect of being challenged by worthy competitors. We need to continue to build on our commitment to excellence, excitement, and public advocacy. We also need to reach out more effectively to the next generation of scientists, the postdocs and students who are really the ones who will determine the future of science. For all these reasons, I decided some time ago (long before I decided to move to Genentech) that it was time in this year of change and hope, to pass the baton to a new Editor-in-Chief. Tom Misteli is the perfect choice: a generalist, an excellent scientist, and enthusiastic supporter of science and the *JCB*. Look for many, many new initiatives that we hope will seize ever more attention in our community. One will come later in 2009, when Tom and I plan to host a special *JCB Symposium* for new and newer scientists, which if successful, will be a regular and highly prized series hosted by *JCB* editors.

It has been a high honor for me to lead the *JCB* for the past decade. Not only has it been a thrilling challenge and a serious responsibility, but it has been a joy to work ever so closely with some of the best scientists I have ever known, and to discuss matters of science and cell bi-

ology with a depth and degree of excitement that is inspiring on a daily basis. The best path to success is to surround yourself with people far better than you, and that is precisely what I have done at the *JCB*, and why it has been such a privilege to take a turn at the helm.

And to Tom, in the words of Captain Jack Sparrow: “Bring on that horizon!”

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