

On the GSA Journals

In the first part of an ongoing series of conversations with the editors of the GSA journals, we chat with

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When did you first become interested in being a scientist?

I always wanted to be a scientist. I was curious about what was in the

world. I had a chemistry set when I was quite young, and I remember collecting butterflies, husbanding tropical fish, and bird watching. But what really captured my interest was microscopic life. I had a small microscope and would look at drops of pond water, captivated by the animalcules swimming around. When I was in middle school, I read a biography of Louis Pasteur. I was fascinated that we could learn things about organisms that couldn't be seen (without magnification). That book and its ideas sealed the deal for me. And, as it happens, for the past ~15 years, I've been studying the basis of the Pasteur Effect (and its opposite, the Crabtree/Warburg Effect).

As EiC of *GENETICS*, you've long been a proponent of 'peer-editing'—a term and a concept you've coined. What does that mean, and why is it important?

Until recently, the standards of science have been determined by actual practicing scientists. That tradition goes back to at least The Enlightenment, with the French Academy, which evaluated and certified (or rejected) every major discovery that was made. Established scientists who were leaders in their fields determined which ideas and discoveries were valid and which were specious. That was still mostly the case when I entered graduate school (in the mid '70s): the premier journal in my field was the *Journal of Molecular Biology*, whose editors were the founders of the field, household names among its practitioners. By 1980 a new paradigm for journals had emerged, in which the most prestigious journals were edited not by practicing scientists but by professional science journalists, often with little experience as scientists. I've never understood why we gave them the authority to set the standards of our field. I think practicing scientists—peers of the authors who submit their work for publication (and validation)—should reclaim their responsibility for setting the standards of the field. We are doing that with *GENETICS*, as are many other society-sponsored journals. But we will only be successful if grant review and hiring and promotion committees recognize that work published in peer-edited journals has passed the most stringent scrutiny—that of our peers—and if authors continue to submit their best work for publication in peer-edited journals.

How does a journal like *GENETICS*, dating to 1916, manage to innovate and at the same time build on its illustrious history? How is *GENETICS* staying on the cutting-edge?

History and innovation are not mutually exclusive. In fact, they're

complimentary! Progress in science builds on the work of others. The past and the future are inextricably linked. That's been part of my core vision since I became Editor-in-Chief.

The lions of the field have published seminal work in our journal, from Bridges, Muller, and McClintock to Brenner, Horvitz, and Hartwell. Authors can publish in the same journal as did Luria and Delbruck, and Sewall Wright, and Ronald Fisher, and Crow and Kimura (and many other luminaries).

And while *GENETICS* provides a professional and scientific thread that extends back to the founders of our field, it also points to our future. We provide intellectual leadership in emerging areas such as genomic selection for improvement of crops and livestock, and the use of multiparent crosses to study complex traits, with novel series like YeastBook and our Educational Primers, and with innovative features like links in articles directly to model organism databases, ORCID ID integration, and article themes published across *GENETICS* and *G3*, for maximum impact.

Scientific publishing and communication are rapidly changing, and our goal is to lead rather than follow. Making the most of the newest technology, including social media, helps us to communicate scientific findings more efficiently and in more interesting ways than even five years ago. We've just added Altmetric data to articles so authors can see who's talking about their work. We've streamlined our editorial processes and pride ourselves on being accessible, agile, and fast! For several years, our goal has been to give authors a first decision within 30 days. We answer pre-submission inquiries and can even fast-track manuscripts. Our early online articles are free to read, and are in PubMed, complete

with DOI, within a week or so of acceptance. In that sense – we're not your mentor's *GENETICS*!

Our field is data-driven. It's important to make sure authors provide that data, so others can re-use and replicate results, and we've got a data policy that upholds that idea. We've also made supplemental data easy to find, and publish just about any format authors dream up. As always, we still want authors to tell their whole story – with no limits on pages, figures, or supplemental data. We now allow deposits of manuscripts in pre-publication servers like arXiv, which was a direct response to community requests.

Because our editors are part of the practicing scientific community, we have direct connections that provide insight into real-world problems researchers encounter with their science, and their needs in communicating it. All in all, we're honoring our rich legacy and at the same time charging forward.

Why publish in a society journal, specifically *GENETICS* or *G3*?

Scientific societies (and its members) are the trustees of their journals. Only societies provide the transparent governance that ensures that the journal is serving the community and the field. Like a company's Board of Directors ensures that the leadership is acting in the best interests of the shareholders, the GSA's Board of Directors makes sure that the journals' leadership is serving its stakeholders—communities of scientists and the larger society that ultimately benefits from scientists' research output. By publishing in the journals of the GSA, authors support more than just the Society; they're supporting science and communities way beyond our reach.

When authors submit manuscripts to journals not affiliated with a scientific society, they might ask themselves who and what they're supporting, what effects conflicts of interest and funding sponsors may have on the end

result, and under whose aegis their work will be published. It's important to understand the environment, the bigger picture—which can be easy to miss when the field is flooded with new journals and new publishers, some with loud voices and aggressive marketing and branding, wrapped in backers with deep pockets. Look closer and you'll see that society-sponsored journals have long been doing what some of the flashy new ones are touting.

What's on the horizon for *GENETICS*?

We're expanding our scope into several areas. We'd like to attract more articles in human genetics. Astonishing advances in DNA sequencing and genotyping technology have quickly brought analysis of humans almost to the level of that of model organisms. Significant answers to fundamental genetic questions are likely to come from studies of humans in the near future, and *GENETICS* should be part of that conversation. The same technological advances, and others, such as recent advances in gene editing technology (several of which were recently reported in *GENETICS*), have leveled the playing field for experimental organisms. Because new methods and technology are necessary for advancing science, we are expanding our Methods, Technology and Resources section of the journal. And *GENETICS* has been encouraging and facilitating the development of new experimental model organisms with its Toolbox series of articles that highlight resources available for emerging model organisms. *GENETICS* in fact wants more submissions of manuscripts reporting original research using these organisms. That's groundbreaking stuff!

What's the best piece of advice for a young scientist?

Be a student or postdoc for as long as possible! It's the best time of your career because you're only responsible for yourself. If you work hard (and smart) and choose the right mentors,

you're given extraordinary freedom to discover. It's an unbelievable and creative opportunity.

What do you like about being EiC?

First, I'm proud to carry the baton on this leg of the journal's race. It's an honor to be on the roster of *GENETICS* EiCs, to be linked back to the founders of our field. Second, it's a joy to work with our Editorial Board. I rely on them heavily and am always impressed with their insightful counsel and dedication. My heart swells with pride when I read their decision letters, which are always—yes, always—thoughtful, fair, and helpful. I sincerely believe that *GENETICS* editors are setting the standard of peer-editing, helped by reviewers who take their roles seriously. Third, I enjoy helping authors improve the presentation of their stories, which ultimately improves the impact of the work. This is a major goal of our reviewers and editors, and it's satisfying to see that result. I actually like wordsmithing. For the past few years I've been editing the titles of at least half of the manuscripts that are accepted. Finally, I love working with our Editorial Office staff. Anyone who has interacted with Tracey, Ruth and Wendy knows how efficient and engaged they are. Our new Journals Assistant Editor, Cristy Gelling, PhD, came on board in January and is a terrific science writer. Having a robust editorial office was one of my goals when I took the role as EiC, and I think we've achieved that.

Rumor has it you like to ski, hike, golf, and fish. Been on any adventures this year?

I moved to Denver five years ago. Colorado offers lots of opportunities to be outdoors. One of my new year's resolutions is to carve out the time for just that. Last fall, I went on a terrific 4-day bike trip through Canyonlands in Utah. I'm hooked! I'm going to do it again this year.