Civil, sensible, and constructive peer review in APS journals

Hershel Raff¹ and Dennis Brown²

¹Departments of Medicine, Surgery, and Physiology, Medical College of Wisconsin and the Endocrine Research Laboratory, Aurora St. Luke’s Medical Center, Aurora Research Foundation, Milwaukee, Wisconsin; and ²Center for Systems Biology and Program in Membrane Biology/Division of Nephrology, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts

PUBLICATION OF OUR SCIENTIFIC work is our currency: unpub-
lished results are invisible to the community at large and are,
therefore, equivalent to work that has never been done. Be-
cause of this requirement to publish sound science, the process
of peer review is part of our culture and has been integral to
ensuring the highest quality of our publications since the 18th
century (9). However, this concept has been questioned repeated-
lly over the past few decades (2, 6, 10, 12, 13), and some
have even advocated eliminating prepublication peer review
altogether (1, 7). The underlying premise of this initiative is
that anything in the correct format is publishable, and that
postpublication scrutiny using blogs and comments, a vox
populi of sorts, will ultimately expose the truth. This was called
“scholarly skywriting” almost two decades ago (5) and more
recently “trial by twitter” (11). While proponents of this school
of thought have increased in number and influence, the Publi-
cations leadership of the American Physiological Society
(APS) continues to believe that prepublication peer review is
worth the effort and cost and is critical to maintaining the
scientific integrity of our publications.

That being said, it is also vital that the peer review process
be fair, equitable, and civil. There is no room for ad hominem
comments in peer review, nor should self-serving or inap-
propriate motivations be allowed. Our Editors and Publications
Committee occasionally receive complaints from authors that
unreasonable demands and impossible requests for new exper-
iments are articulated in reviews. We have probably all expe-
rienced such unnerving comments at one time or another.
Requests for numerous new experiments, extensive new data
analyses, or an unreasonable extension of the original hypo-
thesis based on reviewer bias can be discouraging and inap-
propriate. Our Editors-In-Chief and Associate Editors handling a
manuscript know that it is within their prerogative to modify or
even discard such extensive and sometimes impossible re-
quests by reviewers. Indeed, we encourage our editors to
clearly articulate in their cover letter to authors which parts of
the requests for revision by the reviewers are critical and which
are unreasonable or unnecessary.

So, what can be done to address these issues and improve the
peer review process? To reduce the types of inappropriate behav-
ior mentioned above, it has been proposed that revealing reviewer
identities to authors might be helpful (3). It has also been sug-
gested that removing author names from submitted manuscripts
(and for that matter, grant applications) may improve the process.
The APS Publications Committee has discussed and rejected both
of these tactics and disagrees with the idea that they would
improve peer review. This decision has been confirmed consis-
tently by several thorough scientific analyses that failed to find a
beneficial effect of blinding reviewers to authorship or of asking
reviewers to sign their reviews (4, 8, 14, 15). It is virtually
impossible to disguise authorship of well-known scientists within
an area of focus (8), and many highly qualified and sought-after
reviewers would not agree to participate in the process if they
could not maintain anonymity (15).

Instead, we prefer to be persistent in the education of our
reviewers and editors alike, urging them to be sensitive to the
needs and expectations of our author base. Most of those
responsible for the review process are, of course, authors
themselves. We ask them to wear their author hats when they
are working on the other side of the fence performing the peer
review process. The ethic of reciprocity should always come to
mind; we should treat others as we expect to be treated.

This editorial is intended to alert participants in the publi-
cation process that they have the responsibility to ensure that
review procedures are rapid, fair, and equitable. This includes
reviewers who should not let their personal feelings or exper-
imental bias influence reviews; it includes editors who should
strive to function not as administrators who simply pass along
reviewers’ comments to authors without guidance; and it in-
cludes authors who should realistically assess the comments of
the reviewers and determine whether the remarks are justified.

In this way, we hope to continue to transform the APS
publication process into one that satisfies the dual requirements
of ensuring scientific rigor as well as providing authors with a
satisfying and constructive experience that will encourage
them to submit their best work for consideration in our jour-
nals.

DISCLOSURES

H. Raff is chair of the Publications Committee of the APS. D. Brown is
Editor-in-Chief of Physiological Reviews.

AUTHOR CONTRIBUTIONS

Author contributions: H.R. and D.B. drafted manuscript; H.R. and D.B.
edited and revised manuscript; H.R. and D.B. approved final version of
manuscript.

REFERENCES

1. Badger K. The Faculty of 1000 Biology factor will revolutionize scientific
2. Cicchetti DV. The reliability of peer review for manuscript and grant
4. Godlee F, Gale CR, Martyn CN. Effect on the quality of peer review of
blinding reviewers and asking them to sign their reports: a randomized
5. Harnad S. Implementing peer review on the net: scientific quality control
in scholarly electronic journals. In: The Electronic Frontier, edited by


