Editorial: Celebrating the quality of our Referees

One of the key strengths of *The Journal of Physiology* is the integrity of our referees and the quality of their reports. This is a brief overview of the refereeing process, by way of encouragement to young researchers to get involved and as a ‘thank you’ to all of the many referees that contribute to reviewing manuscripts submitted to *The Journal*.

What makes a good referee? The answer depends on which side of the Peer Review System you happen to be sitting when the question is posed: as an author having just submitted your best physiological research (to the best journal of physiology) we all have a tendency to consider a ‘good’ referee as ‘anyone that recommends acceptance of our MS’! On the other hand, we are also research connoisseurs, excited by the novel concept or insight we gain from reading and understanding the work of our colleagues. And with this, we know that constructive criticism is a powerful means of improving the science and the presentation of complex ideas. Many authors also serve as referees for further manuscripts, so on the one hand we aspire to fairly evaluate the research submitted by others (refining our critical faculties and raising the standards by which science is conducted in the process) and on the other hand, we crave the assurance that our own research is publishable. The resolution of this dichotomy is, I feel, one of the multitude of ways in which participation in both processes (as referee and author) helps us improve the quality of physiological research.

A thorough and detailed referee’s report represents a lot of work and is valuable for both referee and author. The referee is getting an early (confidential) look at some potentially important research and to evaluate whether the data justify the conclusions. The author is receiving a new perspective from an independent expert on the strengths and weaknesses of the research. The refereeing process effectively brings the writer and the reader to a consensus on whether the essential details are clear; in the sense that an inexperienced writer often generates ambiguities, which undermine the logic and clarity of the research. Indeed, one of my personal delights in refereeing is the serendipity of receiving a manuscript to review in which beautiful science may be concealed by the style or language (perhaps because the authors are writing in their second language); these are the gems where a little polish can really help. So the objective of a good referee is not simply to find fault, but to test the strength and validity of the data and conclusions, and help the authors improve their article.

When starting your scientific career, how do you become a referee? There are a few things you can do to enhance your prospects of being asked to review. At *The Journal of Physiology* we regularly receive emails from individuals requesting to be a reviewer. We do not have a formal list of reviewers, since individuals are invited by a Reviewing Editor as needed to handle the subject matter of specific papers. But there are a few things you can do to increase the likelihood of being asked: 1. *Journal of Physiology* authors are our primary pool of referees, they know what a good article looks like because they can write one; so consider submitting your research to *The Journal*. 2. Update your personal profile on *The Journal* website, including the key words that reflect your research expertise. Over the next year we plan to introduce a database in which those interested in reviewing can be registered, and we are also introducing an annual recruitment of up to five Editorial Fellows.
through which young researchers can get involved with a Senior Editor and participate in the editorial process.

So what advice can I give about writing a referee’s report? A good referee seeks to provide constructive critical feedback to the authors and as an aid to this, s/he should be familiar with the instructions to authors and with the remit of the journal. As a first pass and to rapidly turn around manuscripts and avoid delays we use triage; this is usually performed by the Senior or Reviewing Editor. It tends to be used if the authors have submitted a manuscript that is outside The Journal’s remit, or if the authors have not appreciated that their manuscript must represent a significant step forward in knowledge, or if the manuscript fails to provide sufficient mechanistic insight. The aim is to process these submissions quickly, so that the authors get some feedback, but we do not further waste their time (and they can submit elsewhere without delay). If a manuscript has made it through this initial screen, then an invitation to be a referee will come from a Reviewing Editor, usually via a Peer Review Coordinator. You receive the title and abstract to assist in making your decision to accept the role. Then you have 10 days to submit your report; usually they sit on your desktop for 9.5 days.....

Confidentially is crucial to conducting a fair appraisal of a paper; and we expect our referees to treat any manuscript with the respect they would demand for their own work. Nevertheless, asking advice or assistance from colleagues is reasonable. Most journals encourage mentors to engage their trainees progressively in the reviewing process, first as a collaborator, and eventually as an independent substitute. It is certainly good practice to identify any lab member who has contributed to a review in the confidential feedback to the editor and many journals specifically ask for any contributors to be named. Indeed, my first experience of reviewing was as a postdoc when my supervisor passed along a few Journal of Physiology manuscripts that he was working on at that time. With the benefit of his feedback I got to appreciate what was important and how to provide constructive criticism. A key skill for a referee is to quickly assess the overall strengths and weaknesses of the manuscript. Read the abstract (and key points) then glance through the figures to get an overview, before going into the detail of the text. Fundamental problems should be noted at this stage. Other key questions are: whether the methods are appropriate, are there animal ethics issues, and whether the results justify the authors’ conclusions? It is good practice to give a brief summary of what’s important about the MS and then focus on the major problems, with a list of minor issues (e.g. experimental conditions, queries and typos) being listed at the end.

Is there such a thing as a poor referee? Of course! There are a number of styles of reviewing that are best avoided. An anodyne or brief report will carry little weight with the Editor, because they need to understand the evidence for your overall recommendation. At the other extreme, another unhelpful style is where a referee exaggerates the severity of minor failings, or uses unnecessarily harsh (or even personal) language. Sometimes (rarely) I come across a manuscript in which I can find no substantial criticism; it is hard to write a glowing report without the feeling I’ve missed something! Remember that there will always be multiple referees and the Editor is reading both the manuscript and the reports, so other opinions will arise to correct any errors you might make. And if not, then the authors will be only too happy to provide a robust defence as part of their response to the referees.
I am often asked if it would be fairer to have open refereeing, where the authors are aware of who is commenting on their work; or the opposite - where neither referees nor authors are known to either party. There are two problems with these scenarios. The first is human nature: some of our colleagues find it hard to come to terms with rejection and have long memories of the injury caused, so naming those who ‘caused’ this rejection will generate future bias. It is ‘safer’, in my opinion, not to know who recommended rejection of my work, and those who claim this knowledge would not influence them may be overestimating their self-awareness. The alternative, that papers be reviewed without author names and sent to anonymous referees, would also fail to increase integrity unless we were to ‘outlaw’ self-citation. It is easy for the referees to identify the laboratory and senior authors from citations in the introduction and methods. In addition, those who are most expert in a given field (and therefore most qualified to serve as referees) are often well-aware of projects ongoing in the labs of their colleagues and competitors though presentations at meetings and general conversation. Nevertheless, transparency is a frequent topic of discussion at the editorial board and as a result of this on-going discussion, The Journal now intends to publish the names of the Reviewing Editor and Senior Editor who were involved with the handling of every accepted manuscript.

Although there may be some advantages of being fashionable, the increased ease with which search engines can find our abstracts and papers means that impactful research published in a recognised international journal will be known to your peers. If your paper is well written and has a clear conclusion, it will be cited, not just over the next two years but over the long term. The strength of journals like The Journal of Physiology lies with the quality of its reviewing and its referees. We hope you will eagerly embrace the opportunity to contribute to our quality when invited to do so.