

## In praise of referees

Peer review is an essential part of scientific discourse, and referees deserve formal recognition for the service they provide.

Upon receiving a review request from an editor, an obvious question may come to mind: should I spend my time evaluating someone else's work and suggesting how to improve it when I have my own experiments to design, papers to write and funding to apply for?

Peer review is a primary means by which researchers can contribute to a field and add to their own knowledge. Science breathes community, with good referees providing valuable, productive critiques of others' work. Referees for Nature journals are asked to evaluate much of the highest-impact scientific research published worldwide. Editors mindfully help keep referee comment quality high and ensure that the peer review process is objective and critical while providing useful advice to researchers. This advice often improves a manuscript even if it must be published elsewhere. Good referees are called upon again and again, whereas those who offer little more than a yea or nay are not. Repeated reviewing is an invaluable part of the scientific process. It should be considered a measure of academic output and deserves to be taken into account in professional evaluations of academic researchers.

To provide our referees with documentation of their valuable service, they can now download or e-mail an official record of their yearly reviewing activity at *Nature Methods* or, if they have linked all their accounts, at all the Nature journals they have reviewed for. We hope that this information helps to make peer review activity more visible and to establish it as another important measure of the contributions of individuals and their institutions to scientific research.

We are, of course, well aware that reviewers often obtain assistance in their reviews from junior researchers in their laboratory. This is particularly true for methods papers because the individuals actively performing experiments are often in the best position to comment on technical details and help ensure a method is reproducible. The senior investigator charged with the review is the one responsible for the content of a review report and will receive official credit for it, but she or he should communicate the names of all those who contributed to the report when submitting it.

Assisting in peer review is essential for expanding a young researcher's knowledge and skill set and for ensuring the continued health of the peer review system. We try to transmit our decision and all reviews to the referees

of a manuscript. By passing these on, in confidence, to those who assisted in the review, we offer young researchers the opportunity to see how others evaluated the same work.

Before senior investigators turn down a review request because of a hectic schedule, perhaps they can remember that highly qualified senior postdoc in their lab who is willing to help and eager to learn. We encourage the investigators to speak with the editor about letting this individual be the designated reviewer. The senior investigators can then also indicate that they will oversee the review and scrutinize the comments before they are submitted. The junior reviewer should indicate who supervised the review in the comments to the editor.

There is little to be lost and much to be gained in opening up the process so that junior scientists can be formally recognized as part of the community of reviewers. The editor may decline the offer of an alternate reviewer. This recommendation could, however, also lead an editor to request a review directly from the junior researcher sometime in the future. We are careful about the referee selection process, but we remain on the lookout for good new reviewers.

Junior researchers often have a limited history of publication and funding, making it hard to compete for scarce independent positions. Repeated peer review activity is a good indication of scientific judgment and independence as judged by the level of trust afforded by former supervisors and journal editors. Search committees should be aware of this activity, and we hope they find our refereeing documentation valuable. Additionally, *Nature Methods* will be selecting a 'Best Young Referee' each year and will provide the recipient with a letter in recognition for the valuable service he or she has provided to the community in spite of the many pressures associated with establishing an independent career.

It is hard to overstate how much we value the time and effort referees devote to the peer review process. Authors often comment that the process substantially improved their study and manuscript, but such feedback is rarely passed on to the referees who were central to this. As we strive to improve communication with our referees, we hope they find real value in this record of their important and ongoing contributions that are essential for reliable and high-impact science.