

Peer review demystified: part 2



We continue our explanation of the peer review process at *Nature Methods*.

In last month's Editorial¹, we described how we select peer reviewers and utilize their reports in reaching an editorial decision on a manuscript. We also explained some of the differences between peer reviewing research papers versus nonprimary content.

Over the years we have made several enhancements, including introducing tools to help reviewers evaluate software code², and adapting a version of the Registered Reports format to review proposals for method performance comparisons³. Here, we describe our efforts to involve early career researchers as peer reviewers, and to bring more transparency to the peer review process.

Calling early career researchers as reviewers

Asking the same people to review time and again is neither respectful of their precious time, nor good for publishing a well-rounded journal – so we constantly strive to add new reviewers to our pool. We also continuously aim to increase the diversity of our reviewer pool, especially in terms of geographical location, gender, and career level.

We have found that early career researchers (ECRs), who are typically still working at the bench, often provide excellent technical reviews. However, as many ECRs do not yet have a long publication record, potential reviewers from this pool can be a challenge to identify. We also suspect that many reviewer reports are written or supported by postdocs or even graduate students, but unless the reviewer tells the editor this, we will never know.

Inspired by our colleagues at the Nature Reviews journals and *Nature Communications*⁴, we have made efforts to bring more ECRs into our reviewer pool. We strongly encourage established researchers to involve their trainees in the peer review process – but please let the editor know who they are, and as early as possible. This allows us to ensure that the trainee becomes visible to our editorial team, and to ensure they will receive proper credit for their role in peer review.

We also encourage ECRs to reach out to us! After reviewing our [Aims & Scope](#), if you think

your expertise is a good match for our research areas of interest, send a brief e-mail describing your expertise and your CV or link to a list of your publications to your favorite *Nature Methods* editor, or to methods@us.nature.com. We also strongly recommend a free [Nature Masterclass training course on peer review](#), which may be especially helpful to ECRs.

Reviewer credit and transparency

Over the years, various Nature Portfolio journals, including *Nature Methods*, have adopted several new initiatives to ensure that reviewers are recognized for their valuable efforts.

First, we encourage all reviewers to generate an [ORCID](#) profile and link it their Nature Portfolio account. This will ensure that verification of your reviewing activity can be automatically transferred. We also provide an email receipt when a review is submitted, which can be used as proof of reviewing activity. Reviewers can also obtain proof of activity from their Nature Portfolio accounts.

Second, we offer 'reviewer recognition'. Reviewers may choose to be acknowledged in the "Peer review" section of a published paper, though authors may not be able to match the reviewer to their report (and authors will not learn who the reviewers were if the paper ultimately gets rejected). Reviewers, however, may sign their reports should they wish to reveal their identities to the authors at an earlier stage.

Third, we also offer '[transparent peer review](#)', which means that the reviewers' comments to the authors will be available as a supplementary file to a published paper. It is up to the authors to decide whether they would like the reviewer reports to be published - reviewers are informed in nearly every communication with the editorial team that publishing reviewer reports is the authors' choice. Reviewer names will not be associated with the reports, unless the reviewers choose them to be.

We strongly encourage transparency in peer review, as we believe this produces the most robust and fair process for all. However, we understand that there are reasons why a reviewer may not feel comfortable revealing their identity, or why an author will choose not to publish the reviewer reports. We do also offer [double-anonymized peer review](#), where both authors and reviewers are anonymous, though it has not been a very popular option,

especially as the scientific community pivots towards more openness.

Finally, a word about the [use of generative AI tools in peer review](#): an AI is neither a person nor a peer, and cannot be held accountable in a process based on trust and deep domain knowledge. The limitations and biases of generative AI tools are well-known. Furthermore, uploading manuscripts into generative AI tools can breach the confidentiality of the peer review process. Reviewers should ask the editor for advice before they utilize any kind of AI tool to support their review.

Summing up

We understand that many of our authors are working in competitive fields, and we therefore consider timeliness to be essential. We aim to send authors a decision in well under 2 months from the time of submission, though circumstances can arise that make the process a bit longer.

We would like to remind our peer reviewers that if you cannot commit to a review (and a possible review of a revised paper in the future!) in a timely manner, please decline the invitation! We realize that work and life circumstances can arise that cause delays, but it is very frustrating when reviewers ghost us. Please drop us a quick line if something comes up so we determine our next steps. Finally, we greatly appreciate reviewers who take the extra time and effort to answer an editor's follow-up questions about their or another reviewer's report.

Peer review is a valuable service that editors organize that helps strengthen scientific papers, even if the journal's ultimate decision is negative. Peer review however is often criticized; we appreciate it is not a perfect process and we applaud the innovations our sister journals and other publishers have initiated to enhance the system. We hope we have provided some valuable insights into our process, and we welcome your feedback and suggestions on how we can continue making improvements.

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References

1. *Nat. Methods* **21**, 361 (2024).
2. *Nat. Methods* **15**, 641 (2018).
3. *Nat. Methods* **19**, 131 (2022).
4. *Nat. Commun.* **15**, 1869 (2024).