

Reviews in Computational Biology

3. Peer Reviewing



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What is Peer-Review?

- Helps the authors improve their work

Internal reports *letters* *documents in progress*

lecture course materials *executive summaries*

progress reports *websites*
CVs *important correspondence*

conference posters *Publications* *job applications*

grant & funding applications *talks & presentations*

What is Peer-Review?

- Helps the authors improve their work
- Independent evaluation of an academic article, usually by an anonymous expert
- Helps the editor decide what to publish

Why Peer-Review?

- Be a good citizen
- Stay at forefront of research
- Sharpen your critical thinking skills
- Impress the editor

Duties as Referee

- **Assess significance**
- **Verify accuracy**
- **Improve clarity**

Significance

- **Is the topic addressed important/interesting?** (Does the review say why?)
- **How original is the review?** (compared with existing reviews of field?)
- **Are the results reported significant?**

Accuracy

- Are all claims backed by evidence?
- Are the evidences relevant/reliable/sufficient?
- Are methods/results appropriate and well-described?
- Is important relevant work omitted?
- Does the review suffer from any bias?

Improve Clarity

- **Is the review well-organised?**
- **Do title/abstract accurately reflect content?**
- **Is there the right level of detail?**
- **Are there language issues or typos?**

Courtesy

- Criticise the work, not the authors
- Mention also positive aspects
- Offer constructive criticism
- Don't write things that you would not say in person

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

On a scale of 1 to 5

0 Fails by a large amount

1 Fails by a small amount

2 Succeeds by a small amount

3 Succeeds by a large amount

4 Not applicable

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

On a scale of 1 to 5

0 Fails by a large amount

1 Fails by a small amount

2 Succeeds by a small amount

3 Succeeds by a large amount

4 Not applicable

*Is the subject addressed in this article
worthy of investigation?*

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

On a scale of 1 to 5

0 Fails by a large amount

1 Fails by a small amount

2 Succeeds by a small amount

3 Succeeds by a large amount

4 Not applicable

Was the information presented new?

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

On a scale of 1 to 5

0 Fails by a large amount

1 Fails by a small amount

2 Succeeds by a small amount

3 Succeeds by a large amount

4 Not applicable

Are conclusions supported by the data?

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

Is there a financial, or other, conflict of interest between your work and that of the authors?

Reviewers' Questionnaire

- Some Journals only
- Ask for a ranking, out of 100
- Questions include...

Please give a frank account of the strengths and weaknesses of the article

Iteration Process

- Reviewers' comments to the Editor
- Authors make changes but respond with comments
- Revision with comments sent back to the reviewers
- Editor asks reviewers if they are happy?... If not repeat...

Normal Timescale

- Normally from 1 week to 1 month
- Repeated duration if iterated
- If delayed, the Editor might decide instead

Anonymity

- The rule not the exception
- Exceptionally some journals provide reviewers' comments ...

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- ▼ [Editing reviewer reports](#)
- ▼ [Timing](#)
- ▼ [Conflicts of interest](#)
- ▼ [Publication policy and ethical considerations](#)

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Biology Direct operates on an open peer-review system, so each of the reviewers' comments accompanied by their name will be reproduced alongside the article, if published. The journal aims to publish all manuscripts that have attracted sufficient interest of Editorial Board members to result in 3 reviews. The reviews may be highly critical of the work or even outright negative, which in itself does not preclude publication should the authors decide to proceed. However, the reviewer also has the option to recommend rejection of manuscripts that have no scientific substance, or do not meet the standards of a scientific work.

Points to consider

Reviewers should refer to items under discussion using paragraph references (eg: Methods, third paragraph), rather than manuscript page numbers, as the pages numbers will not match the final version of the published article.

Reviewers are asked to mark minor comments (spelling, typographical errors, grammatical errors, stylistic suggestions etc) as "Minor issues not for publication" so that, once addressed, the author may remove them from the review.

1. Is the question posed original, important and well defined?

The research question posed by the authors should be easily identifiable and understood.

It is useful to both the editors and authors if reviewers comment on the originality and importance of the study within the context of its field. If the research question is unoriginal because related work has been published previously, please give references.

Reviewers should ask themselves after reading the manuscript if they have learnt something new and if there is a clear conclusion from the study.

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