Peer review of medical journal

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Participants should be able to follow after this hour:

1. What is the goal of peer review?
2. Recent or innovating trends of peer review in medical journals
3. Reporting guideline used in peer review
4. How to write a peer review opinion?
Goal of peer review: which is the most important out of 5 purposes?

• To find the manuscript with high originality.
• To select the manuscript citable frequently
• To treat a famous researchers’ manuscript courteously
• To find the manuscript helpful to patients
• To screen low quality manuscript to maintain minimum quality of the journal
Level of journal

• Journal level = Editor’s competency + Publisher (Society)’s competency

• Editor’s competency:
  – How to recruit the good manuscripts
  – How to recruit good reviewers

• Publisher’s competency:
  – Stable budget
  – Society member’s research competency
What are the recent or innovating trends of peer review in medical journals


• Reviews are being transferred (‘cascaded’) and shared between some journals
• Separation of the two basic functions of peer review—critical review and selection
• Post-publication review
• ‘Portable’ reviews
‘cascaded’ and shared review

- A journal
- B journal

Manuscript

Review opinion
Separation of the two basic functions of peer review—critical review and selection

• Example: open access journal *PLOS ONE*

• Publication would be based on
• the soundness of the research (methodology, results and reporting)
• not its novelty, importance or interest.
All Science Deserves to Be Published

PLOS ONE gives researchers a faster path to publishing in a high-quality peer-reviewed journal. All work that reaches rigorous technical and ethical standards is published and freely and immediately available to everyone.

Submit your next article to PLOS ONE and find out why more than two-thirds of authors rate their publishing experience with PLOS ONE as better than any other journal.
Post-publication review

• Peer review doesn’t stop at publication

• Example: [https://pubpeer.com/](https://pubpeer.com/)

• PubMed Commons: Comment after publication
PubMed Commons

Trending Articles

PubMed records with recent increases in activity

De Novo Epigenetic Programs Inhibit PD-1 Blockade-Mediated T Cell Rejuvenation.

Health, Wealth, and the U.S. Senate.

The Diagnosis and Treatment of Prostate Cancer: A Review.

Effective treatment options for

PubMed Commons

Featured comments

Building libraries for CRISPR screening: Author @zhangf expands on design considerations & applications.
bit.ly/2sF5red
Jun 29

Connecting report & repository: Author C Trolle posts link to DNA methylation data from study of Turner syndrome.
bit.ly/2sB6Imk
Jun 28

Consistency in results: @kaymtve
Improved vectors and genome-wide libraries for CRISPR screening.
Example of comment

PubMed Commons

How to join PubMed Commons

Feng Zhang 2017 Jun 15 6:23 p.m. edited 4 of 4 people found this helpful
A number of researchers have inquired about the presence of duplicate sgRNAs (same sgRNA for more than one gene) in the GeCKOv2 library (Sanjana et al., Nature Methods 2014) and non-specific sgRNAs that have additional exact matches in the genome. We would like to further clarify the design considerations for GeCKOv2 (Supplementary Methods, Sanjana et al., Nature Methods 2014).

For the GeCKOv2 libraries we decided to take the “best” sgRNA (i.e. with the fewest off-targets) we could find for a given gene, even if in some cases our “best” sgRNA had more than one targeting location in the genome. This was done to sample as many targets as possible and minimize false negatives, since false positives that are due to an sgRNA with more than one target or off-target effects can be easily eliminated in post-screen validation experiments or
‘Portable’ reviews

• Before submitting manuscript, authors can take reviews with them and include them with submissions to journals.

• Example:

• Peerage of Science: http://www.peerageofscience.org

• Rubriq: http://www.rubriq.com
Peerage of Science

A free service for scientific peer review and publishing your science, your call

Submit Your Manuscript

Search and explore Peer profiles...
...and get your own!
Rubriq

Rigorous, high-quality peer review

Who we are

Rubriq is Research Square's rigorous, rapid peer review system, developed in conjunction with publishers, journal editors, and researchers to save effort and speed up the publishing process. With years of experience and thousands of papers completed, our standardized Rubriq report and reviewer matching system allow us to provide top-quality peer review from highly qualified researchers in just two weeks. More information about Rubriq is now available on the Research Square site as part of our array of
Reporting guidelines

- Checklist for a variety of study designs of medical manuscripts.
- Equator network:
- Used for not only manuscript writing but also peer review
- About 300
Common study designs and their reporting

- randomized trials, CONSORT (Consolidated Standards of Reporting Trials);
- observational studies, STROBE (STrengthening the Reporting of OBservational studies in Epidemiology);
- systematic reviews, PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses);
- case reports, CARE (Consensus-based Clinical Case Reporting);
- qualitative research, SRQR (Reporting of qualitative research studies); diagnostic/prognostic studies, STARD (Studies of diagnostic accuracy);
**STROBE-Checklist for cross-sectional studies - Title, abstract, and Introduction**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| **Title and abstract** 1 | (a) Indicate the study’s design with a commonly used term in the title or the abstract  
(b) Provide in the abstract an informative and balanced summary of what was done and what was found |
| **Introduction** | |
| **Background/rationale** 2 | Explain the scientific background and rationale for the investigation being reported |
| **Objectives** 3 | State specific objectives, including any pre-specified hypotheses |
# Methods (1)

<table>
<thead>
<tr>
<th>Study design</th>
<th>4</th>
<th>Present key elements of study design early in the paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>5</td>
<td>Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection</td>
</tr>
<tr>
<td>Participants</td>
<td>6</td>
<td>(a) Give the eligibility criteria, and the sources and methods of selection of participants</td>
</tr>
<tr>
<td>Variables</td>
<td>7</td>
<td>Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable</td>
</tr>
<tr>
<td>Data sources/measurements</td>
<td>8*</td>
<td>For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group</td>
</tr>
</tbody>
</table>
## Methods (2)

<table>
<thead>
<tr>
<th>Bias</th>
<th>9</th>
<th>Describe any efforts to address potential sources of bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study size</td>
<td>10</td>
<td>Explain how the study size was arrived at</td>
</tr>
<tr>
<td>Quantitative variables</td>
<td>11</td>
<td>Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why</td>
</tr>
<tr>
<td>Statistical methods</td>
<td>12</td>
<td>(a) Describe all statistical methods, including those used to control for confounding &lt;br&gt; (b) Describe any methods used to examine subgroups and interactions &lt;br&gt; (c) Explain how missing data were addressed &lt;br&gt; (d) If applicable, describe analytical methods taking account of sampling strategy &lt;br&gt; (e) Describe any sensitivity analyses</td>
</tr>
</tbody>
</table>
Reporting guideline (2)

- quality improvement studies, SQUIRE (Standards for QUality Improvement Reporting Excellence);
- economic evaluations, CHEERS (Consolidated Health Economic Evaluation Reporting Standards);
- animal pre-clinical studies, ARRIVE (Reporting any area of bioscience research using laboratory animals);
- study protocols, SPIRIT (Defining standard protocol items for clinical trials);
- clinical practice guidelines, AGREE (Reporting of clinical practice guidelines.).
Why reporting guidelines?

- Medical editors usually recommend authors and reviewers to refer to reporting guidelines not only for a manuscript preparation but also for peer review of the manuscript.
- Therefore, medical authors and peer reviewers should be able to use checklist of a variety of reporting guidelines.
# How to write a peer review opinion?

<table>
<thead>
<tr>
<th>No.</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summarize the whole content of manuscript in one sentence.</td>
</tr>
<tr>
<td>2</td>
<td>Describe the recommendation for revision by each section if present.</td>
</tr>
<tr>
<td>3</td>
<td>Describe the special opinion only to editor not to authors.</td>
</tr>
<tr>
<td>4</td>
<td>Consider if the peer review opinion may increase the quality of manuscript or further research by author.</td>
</tr>
<tr>
<td>5</td>
<td>Reflect on the my review opinion if it is dispatched to reviewer, myself.</td>
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</tbody>
</table>
Conclusion

- Peer review of medical journal
- -->
- Goal—Minimum quality for my journal
- Evolution to new type
- Reporting guideline
- Authors are my colleague in my research field.
감사합니다.

• Thank you. 谢谢, धन्यवाद,
• ありがとうございます。
• ありがとうございます。
• ขอขอบคุณคุณ, Cảm ơn bạn,
• Terima kasih, Salamat,