

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

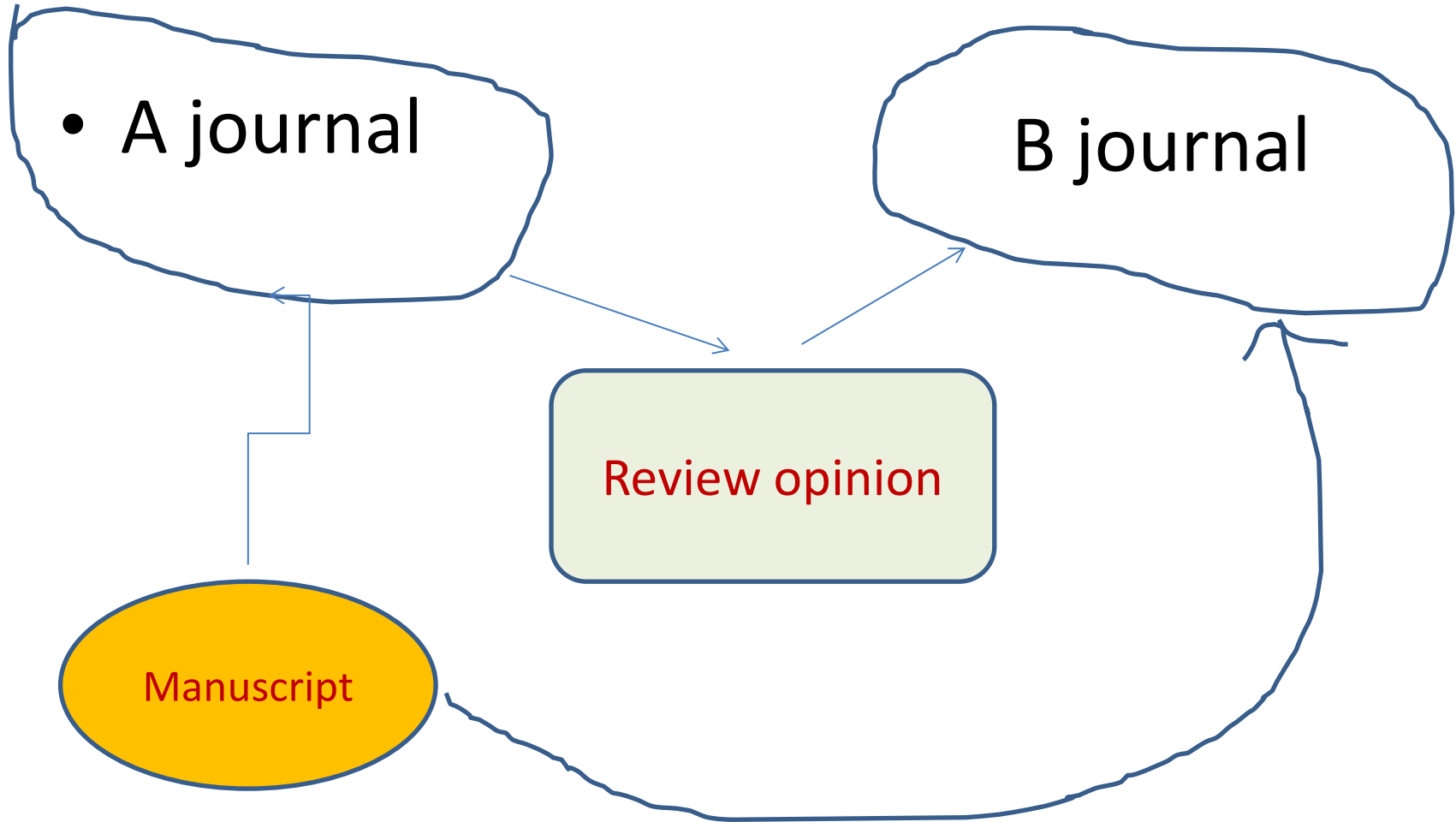
- **Journal level = Editor's competency + Publisher (Society)'s competency**
- **Editor's competency:**
 - How to recruit the good manuscripts
 - **How to recruit good reviewers**
- **Publisher's competency:**
 - Stable budget
 - Society member's research competency

What are the recent or innovating trends of peer review in medical journals

▀ Irene Hames. The changing face of peer review. *Sci Ed.* 2014;1(1):9-12.

- 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



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.

PLOS One

The image is a screenshot of a web browser displaying the PLOS ONE website. The browser's address bar shows the URL `journals.plos.org/plosone/static/publish`. The website header includes the PLOS ONE logo with a 'TENTH ANNIVERSARY' tag, navigation links for 'Publish', 'About', and 'Browse', and a search bar with a magnifying glass icon and a link to 'advanced search'. In the top right corner, there are links for 'plos.org', 'create account', and 'sign in'. The main content area features a large green banner with a close-up image of a leaf and a water droplet. The banner text reads: 'All Science Deserves to Be Published'. Below this, a paragraph states: '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.' At the bottom of the banner, there is a call to action: '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.' A prominent yellow button labeled 'Submit your manuscript' is positioned on the right side of this section. The browser's taskbar at the bottom shows various application icons and the system clock indicating the time as 10:16 PM on 2017-06-30.

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All Science Deserves to Be Published

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Submit your manuscript

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오후 10:16
2017-06-30

Post-publication review

- Peer review doesn't stop at publication
- Example: <https://pubpeer.com/>
- PubMed Commons: Comment after publication

PubMed Commons

The screenshot shows the PubMed Commons page with three main sections: Literature, Trending Articles, and PubMed Commons. The PubMed Commons section is highlighted with a red circle. It features featured comments from users, including one about CRISPR screening and another about DNA methylation data.

Section	Content
Literature	Articles from highly accessed journals Database Syst Rev (8) n (19) ed (20)
Trending Articles	PubMed records with recent increases in activity De Novo Epigenetic Programs Inhibit PD-1 Blockade-Mediated T Cell Rejuvenation. Cell. 2017. Health, Wealth, and the U.S. Senate. N Engl J Med. 2017. The Diagnosis and Treatment of Prostate Cancer: A Review. JAMA. 2017. 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: @kavmtve

PubMed Commons –example article

The screenshot shows a web browser displaying a PubMed article page. The browser's address bar shows the URL: <http://pubmed.ncbi.nlm.nih.gov/pubmed/25075903>. The article title, "Improved vectors and genome-wide libraries for CRISPR screening.", is circled in red. Below the title, the authors are listed as "Santini, NE¹, Shalem O¹, Zhang F²". The article is identified by PMID: 25075903, PMCID: PMC4486245, and DOI: 10.1038/nmeth.3047. It is noted as being indexed for MEDLINE and available as a "Free PMC Article". A section titled "Images from this publication" contains a small thumbnail image. Below this, there are sections for "Publication type, MeSH terms, Grant support" and "LinkOut - more resources". At the bottom of the article content area, the "PubMed Commons" link is circled in red. On the right side of the page, there are sections for "Save items" (with an "Add to Favorites" button), "Similar articles" (listing related papers like "Genome-wide recessive genetic screening in mammalian cells with a ler"), "Review" (for "Gene targeting technologies in rats: zinc finger nucleases, transc" and "High-throughput screens in mammalian cells using the CRISPR-Cas9 sys"), and "Cited by over 100 PubMed Central articles" (with an example: "Disruption of the Axonal Trafficking of Tyrosine Hydroxylase mRNA Impairs Catec"). The Windows taskbar at the bottom shows the date and time as "오후 10:26 2017-06-30".

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Nat Methods. 2014 Aug;11(8):783-4. doi: 10.1038/nmeth.3047.

Improved vectors and genome-wide libraries for CRISPR screening.

Santini, NE¹, Shalem O¹, Zhang F².

Author information

PMID: 25075903 PMCID: PMC4486245 DOI: 10.1038/nmeth.3047

[Indexed for MEDLINE] **Free PMC Article**

Images from this publication. See all images (1) Free text

Publication type, MeSH terms, Grant support

LinkOut - more resources

PubMed Commons [PubMed Commons home](#)

[How to join PubMed Commons](#)

Save items

☆ Add to Favorites

Similar articles

Genome-wide recessive genetic screening in mammalian cells with a ler [Nat Biotechnol. 2014]

Adapting CRISPR/Cas9 for functional genomics screens. [Methods Enzymol. 2014]

CFTR inactivation by lentiviral vector-mediated RNA interference and CR [Curr Gene Ther. 2015]

Review Gene targeting technologies in rats: zinc finger nucleases, transc [Dev Growth Differ. 2014]

Review High-throughput screens in mammalian cells using the CRISPR-Cas9 sys [FEBS J. 2015]

See reviews...

See all...

Cited by over 100 PubMed Central articles

Disruption of the Axonal Trafficking of Tyrosine Hydroxylase mRNA Impairs Catec [eNeuro. 2017]

2017년 대학연구활....z... ^

전체 보기

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오후 10:26 2017-06-30

Example of comment

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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

Cited by over 100 PubMed Central articles

Disruption of the Axonal Trafficking of Tyro [eMol Ther Nucleic Acids Res]

UHRF1 is required for stem cell proliferation [Cell Discov]

Correction of the Exon 1 Deletion [Mol Ther Nucleic Acids Res]

Related information

Articles frequently viewed together

2017년 대학연구활....z... ^ 전체 보기 ×

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오후 10:27 2017-06-30

'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

The image shows a screenshot of a web browser displaying the Peerage of Science website. The browser's address bar shows the URL <https://www.peerageofscience.org>. The website has a dark blue header with the title "Peerage of Science" in a white serif font. Below the header is a navigation menu with links for Home, Solutions, How it works, Peers, Journals, ProcPoS, and FAQ. A "LOG IN" button is located on the right side of the navigation bar. The main content area features a large blue background with a faint globe pattern. On the left, the text reads "A free service for scientific peer review and publishing your science, your call" with a prominent "Submit Your Manuscript" button. Below this are social media icons for Facebook and Twitter, with links for "Review examples" and "Sign up". On the right, there is a section titled "Search and explore Peer profiles... and get your own!" which lists three profiles: Rafael Miranda, Saneer Lamichhane, and Steven Vidovic, each with a small profile picture. At the bottom of the page, there are sections for "Solutions", "News and Views", and "Recent Publications". The browser's taskbar at the bottom shows the Windows search bar, several application icons, and the system tray with the date and time: "오후 11:16 2017-06-30".

Rubriq

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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

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Reporting guidelines

- Checklist for a variety of study designs of medical manuscripts.
- Equator network:
- <http://www.equator-network.org/>
- Used for not only **manuscript writing** but also **peer review**
- **About 300**

Equator network

The screenshot shows the Equator network website. At the top, there is a browser window with the URL www.equator-network.org. The website header features the Equator network logo on the left, the tagline "Enhancing the QUALITY and Transparency Of health Research" in the center, and a globe icon with the text "EQUATOR resources in Portuguese | Spanish" on the right. Below the header is a navigation menu with the following items: Home, Library, Toolkits, Courses & events, News, Blog, Librarian Network, About us, and Contact. A green banner below the menu contains the text "Your one-stop-shop for writing and publishing high-impact health research" and a list of services: "find reporting guidelines | improve your writing | join our courses | run your own training course | enhance your peer review | implement guidelines". The main content area is divided into three sections. The first section, "Library for health research reporting", includes a description of the library and three sub-sections: "Search for reporting guidelines", "Not sure which reporting guideline to use?", and "Reporting guidelines under development". The second section, "Reporting guidelines for main study types", lists various study types with their corresponding reporting guidelines and extensions. The third section, "Possible strategies", lists five strategies: "Open data", "Pre-registration", "Collaboration", "Automation", and "Open methods", each with associated icons.

Library for health research reporting

The Library contains a comprehensive searchable database of reporting guidelines and also links to other resources relevant to research reporting.

- Search for reporting guidelines
- Not sure which reporting guideline to use?
- Reporting guidelines under development

Reporting guidelines for main study types

Randomised trials	CONSORT	Extensions	Other
Observational studies	STROBE	Extensions	Other
Systematic reviews	PRISMA	Extensions	Other
Case reports	CARE	Extensions	Other
Qualitative research	SRQR	COREQ	Other
Diagnostic / prognostic studies	STARD	TRIPOD	Other
Quality improvement studies	SQUIRE		Other
Economic evaluations	CHEERS		Other
Animal pre-clinical studies	ARRIVE		Other

Possible strategies

- Open data**: Open sharing results and the underlying data with other scientists.
- Pre-registration**: Publicly registering the protocol before a study is conducted.
- Collaboration**: Working with other research groups, both formally and informally.
- Automation**: Finding technological ways of standardising practices, thereby reducing the opportunity for human error.
- Open methods**: Publicly publishing the detail of a study protocol.
- Post-publication review**: Continuing discussion of a study in a public forum after it has been published (once any necessary corrections have been made).

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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

	Item No	Recommendation
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)

Study design	4	Present key elements of study design early in the paper
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
Data sources/ measurement	8*	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

Methods (2)

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

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?

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

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。 ,
ขอขอบคุณคุณ, Cảm ơn bạn,
- Terima kasih, Salamat,