# Lessons learnt from the International Peer Review Week 2022 with the theme – "Research Integrity: Creating and supporting trust in research"

In scholarly publishing, peer review is the single most important aspect that helps maintain the quality and integrity of published papers. In the conventional prepublication peer review process (more on alternate models later), a journal editor often asks reviewers to give their opinion about the rationale for the study, methodology used, statistical analysis done, robustness and accuracy of the results, and whether conclusions are data driven.

Though reviewing standards have been benchmarked based on the tireless work and recommendations of organizations such as the Committee of Publication Ethics (COPE), International Committee of Medical Journal Editors, and the Equator Network (Enhancing the QUAlity and Transparency Of health Research), let's remember that the peer review process is entirely subjective and prone to errors. Some large-scale papers have slipped through the peer review sieve from some of the top journals, only to be retracted later.<sup>[1]</sup> So how do we achieve research integrity and create trust in research from a peer review angle?

This was the central theme of the peer review week 2022, i.e., "Research Integrity: Creating and supporting trust in research" that happened from September 19 to 23, 2022. So what is International Peer Review week (PRW)? This is a virtual global event revolving around the essential role that peer review plays in maintaining scientific quality and is organized every September by a steering committee.<sup>[2]</sup> The purpose of the PRW every year is to get all stakeholders including journal publishers, editors, reviewers, authors, funders, and all others on one forum and discuss some of the important aspects plaguing peer review. The theme last year was "Identity in peer review" and the theme this year, as mentioned above, was how to improve research integrity and create trust in research. I managed to attend a lot of online events conducted by several leading organizations such as the COPE, Accelerating Science and Publication in biology (ASAPbio), Editage Insights, Research Square Company, Scholastica, and many others. In this guest editorial, I discuss some of my learnings in a point-wise fashion and hope that this will enlighten readers on some of the emerging malpractices related to publishing and some solutions to counter this from the editorial and peer review point of view.

1. **Paper Mills:** These are groups (or companies) that can produce totally fraudulent papers (without any data) for a fee and make them look totally authentic **OR** offer authorship for a fee **OR** can even rig the entire review process (e.g., insert guest editors, offer a fee to reviewers) in multiple ways. These are an increasing threat to research integrity and were the highlight of a lot of discussions during PRW. We need systems to weed these out including cross collaboration between publishers, methods to blacklist them, etc., The COPE has come up with an excellent document on this in collaboration with STM, and I highly

recommend reading this resource.<sup>[3]</sup> The "STM Research Integrity hub" is also an excellent resource should you want to learn more about this.<sup>[4]</sup>

- 2. Plagiarism: i.e., taking undue credit for others' work without proper attribution remains a big concern in academic publishing. Most top journals, including the IJO, use the iThenticate software to detect plagiarism. The iThenticate-V2 (a new version) is coming soon and has several additional features/filters, such as opting for specific sections of the paper (e.g., opt out of Methods), the ability to detect paraphrasing (in the process), faster and more user-friendly, etc., However, the biggest revelation for me from discussions during the PRW was that a high "Similarity index" does not always mean plagiarism and a very low index is also unusual. Journal editors need to look at individual reports carefully. Therefore, having a threshold similarity index to label as plagiarism is not the best idea. Self-plagiarism needs to be contained by authors since this is also picked up by iThenticate. Lastly, a journal's plagiarism policy should be clear on the author's instructions page, and the point at which plagiarism is checked should be clearly mentioned.
- 3. **Images are also plagiarized** and are not yet recognized by software like iThenticate. Newer AI-driven software like "Image Twin" helps recognize manipulated images outside the preview of current plagiarism software.
- 4. **Contract cheating:** Outsourcing your work to an external agency without doing any work at all to satisfy authorship criteria is also considered academic misconduct and is labeled as "contract cheating." It is advised that you do the bulk of the work and then use external assistance if needed (e.g., advanced stats or language edits). This falls under the domain of Paper mills somewhat (see Point 1 above)
- 5. Micropublishing: This is a new concept and publishes brief, novel findings, negative and/or reproduced results, and results that may lack a broader scientific narrative (quoted directly from the website). This can be explored more directly at the microPublication website.<sup>[5]</sup> This provides rapid peer review and publication and is indexed in PubMed and all other major indexing services.
- 6. Preprints: Several preprint servers are now operational, and this is evolving rapidly, especially during and after the pandemic, with many repositories at present. An entire list is available on the ASAPbio website,<sup>[6]</sup> which is doing a phenomenal job in setting up standards in preprinting and bringing transparency to this process. Preprint plagiarism is also an emerging major concern that needs to be tackled by collaboration between various servers. A lot of discussions during the PRW hinted toward making preprinting mainstream. Additionally, since the tide on mandatory data sharing is changing, with authors mandated or encouraged by journals to submit their original datasheets for peer review, preprint servers can archive these datasets securely along with the manuscript. Also, a lot of journals, as well as preprint servers, are adopting the FAIR Data Principles (FAIR stands for making data Findable, Accessible, Interoperable, and Reusable), and preprint servers could promote this to a large extent.
- 7. **Transparent (Open) peer review:** Open peer review means that the identity of the reviewers is made available (with

the concerned reviewer's consent) along with his/her comments, timeliness, and final recommendations, once the paper is published. This will certainly improve reviewer performance, and a lot of journals such as the BMJ group have adopted this strategy. Open peer review is another direction toward open science that includes open access publishing models, preprinting, getting a DOI before journal acceptance, open review, final editorial decision, then acceptance, publication into the journal website, and finally indexing in PubMed. The "International Open Access Week" is another global virtual event like the PRW and is conducted in the last week of October every year.

- 8. **Discourage reviewers** from asking authors to cite the reviewer's own work. This is an inherent and rampant problem that needs to be dealt with and was discussed during the PRW.
- Reviewers must be asked to declare their conflict of interest without exception before they review the paper. All journals need to adopt this and should be part of the reviewer guidelines and journal standard operating procedures.

These are some of the things that are undermining peer review integrity at the moment and were discussed at length at various forums during the recently concluded PRW. I hope that some of the new terminologies I have put forward will be beneficial to editors, reviewers, and prospective authors alike and that you will be inspired to not only conduct your own research with integrity but also review papers with the utmost integrity, with the sole purpose of upliftment of science. I also sincerely hope that many of you will follow the international PRW in the coming years and keep learning new things about the peer review process, and perhaps even contribute to its betterment.

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Dr. Sabyasachi Sengupta is a practicing vitreoretinal surgeon at Future Vision eye care, Mumbai. He is the founder and director of Sengupta's research academy, where he offers courses for training budding researchers on techniques of research methodology. He completed his DNB ophthalmology from Aravind Eye Hospital, Pondicherry and received the Dr G. Venkataswamy gold medal for the DNB exam held in December 2009. He finished his surgical retina training from Sankara Nethralaya and went on to do a postdoc clinical research fellowship at Wilmer Eye Institute, Johns Hopkins. He has received the MacCartney prize from the Royal College of Ophthalmologists for ranking first globally in the ocular pathology section of the FRCOphth fellowship exam, and has the distinction of being the first ever non-British national to receive this award. He has received more than 15 distinguished awards so far. Dr Sengupta has published 100 + papers in peer-reviewed journals and is a regular invited faculty on research methodology both in India and abroad.