

## **Open access: pros, cons, and current threats**

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As a founding Editor-in-Chief of a peer-reviewed, open access (OA) journal, I get numerous questions about open access publishing. These range from general, such as the credibility of a pay to publish model, to specific, such as the impact factor and indexing in a major database. I look forward to addressing critical components of this rapidly expanding method of knowledge dissemination.

Open access publishing is a broad term that reflects how digital technology is changing the future of scientific publishing. The OA publishing model has significant advantages, admitted disadvantages, and also some threatening aspects that can sneak in if you don't choose wisely.

OA publication is briefly defined as “digital, online information, free of charge, and free of most copyright and licensing restrictions, readily available to researchers and general public once published”. OA journals do not charge subscription or pay-per-view fees compared to traditional journals. The authors, their institutions, or the research funders pay the “open access” fee to make it free to readers; authors retain copyright for the article and most permission barriers are removed. There are also color codes used with open access publishing. Gold open access denotes that once the article is published, the final version is freely available directly from the journal website. Green open access, on the other hand, refers to self-archiving or placing the published version of author's article into institutional repositories or websites.

### **Benefits & Barriers to OA Publishing**

The key benefits of OA publishing are increased accessibility and visibility as well as shorter publication times compared to non-open access journals. There are no financial or copyright barriers so the readership continues to increase, enhancing the visibility and impact of one's work. OA journals are far more likely to use creative common licenses and offer several other benefits, including free easy access of scientific knowledge, information, and data that strengthen the foundation of research and education. Physicians can stay informed with cutting-edge research to help improve patient care. Patients and the general public benefit from free access to information regarding the latest developments in diagnoses and cures. Overall, when information and ideas are free, they contribute to improved research, education, public enrichment, and economic growth.

Even though OA publishing has several benefits, the majority of authors consider the journal's reputation when selecting where to publish. OA journals have a disadvantage due to misguided perceptions of quality. Researchers and readers are hesitant to publish in or consider OA journals because they question the quality of the published work. In science and medicine, the reputation of a journal is based on the impact factor ranking system. Therefore, the prestige and value of individual papers are often judged according to the impact factor of the journal they are published in. In academia, it is difficult to convince faculty to submit their valuable publications to a venue without an established impact factor as academic promotion and tenure are tied to the impact factor and prestige of the top-tier journal of their field. Of importance, the majority of OA journals are peer-reviewed with the same or higher standards as traditional scholarly journals. However, it takes time for a new OA journal to build a high impact factor. Similarly, indexation of a journal in a major citation database is also considered a reflection of a journal's quality. The process of getting OA journal indexed is similar to manuscript submissions and the relevant peer

review criteria. Unfortunately, indexing newly established OA journals in major citation databases is complex and time-consuming, furthering existing misconceptions of quality.

The pay to publish model of OA publishing has given rise to predatory publishers which are a significant threat to the OA mission and the credibility of science. In these situations, authors can be charged exorbitant open access fees with no or low-quality peer reviews and editorial services.<sup>2</sup> Immediate red flags to these practices are: spam emails with overly informal tones requesting the reader to submit a paper or serve on the editorial board, promises of suspiciously fast-tracked peer-review, lack of transparency around pricing, and obscured identities of the editorial board. So, use caution when choosing OA journals. Submit your work to the OA journals published by reputable and recognizable organizations. Assess journal websites for clarity around the editor and the members of the editorial board as well as required open access fees upon manuscript acceptance. Checking to see if an OA journal is indexed by the Directory of Open Access Journals (DOAJ) is another way to determine the quality of OA journals.

Open access publishing is changing the future of scientific publishing by making research, and scholarly communication more open and transparent to a wider research community.<sup>3</sup> Scholarly communications will only change the world when shared with the rest of the scientific community by publishing in peer-reviewed journals. You invest your time and energy conducting your research and preparing your manuscripts, so be mindful when choosing a journal to showcase your work. Carefully check the quality standards of the OA journal you consider and, with pride, set your work free.

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