

Open Access Publishing and its Role for Researchers in Countries with Limited Science Funding

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Editorial

Access to information is one of the cornerstones of any modern science. Along with the availability of instruments, chemicals, and consumables, it provides the basis for experimental sciences, such as Biochemistry and Pharmacology. Nowadays, it is impossible to imagine that some 20 years ago there was virtually no widespread access to electronic databases. Although there was limited access to databases such as PubMed, Web of Science, Scopus, etc., these databases were not as highly developed as they are now. In effect, the Internet has completely changed all aspects of the information-gathering activities carried out by scientists. In many cases, the Internet provides access to the bulk of scientific literature for free, which – although important generally – is especially vital for research carried out in developing countries and those that appeared after the collapse of the Soviet Union. In these countries, there is not enough support for the sciences, reducing the availability of journals for the scientific community, whether printed or virtual.

In the last few years, the open access platform for publishing electronic journals and books has substantially changed this general picture for many research fields. These publications, such as “The Biochemistry & Pharmacology: Open Access”, provide free access to all materials published, their inclusion in databases like PubMed and Scopus giving them visibility online and wider accessibility. Although, the positive aspects of open access publishing are more or less clear, there is also a need to discuss its downside.

The first and probably most important aspect is connected with the quality of publications under the open access publishing umbrella. Some authors submitting work for publication seem to suggest that if they are to pay money for open access publication, the publisher should accept more-or-less everything they submit. Having some experience with editing books and reviewing manuscripts within the frame of open access, I can say that not only were materials submitted sometimes of a low quality – from a scientific and technical perspective – but plagiarism, in a few cases, was also identified. Although open access schemes include business projects, the quality of submissions

should be of a high scientific standard. In some cases the technical expertise of submitted manuscripts is not assessed by publishers prior to referees being contacted, which can complicate their work and decrease the quality of their analyses. The second issue is that not all researchers can pay for open access publication. In this case, if the material is especially outstanding, publishers could introduce a flexible discount of some kind, or even abolish payment entirely. This is something already practiced, for example, in The Journal of Amino Acids. Such an approach may substantially increase the scientific reputation and significance of the journal. The third issue concerns how open access journals can attract a wider reader base and improve their overall visibility. In my opinion, coordinating centers tasked with accumulating information on materials published under open access schemes are required, and that these centers must be actively advertised to increase their internet presence. This should be the case not only for open access journals, but for those specific open access articles/issues published by predominantly non-open access publishers such as Springer, Elsevier, etc. To some extent this activity is carried out by PubMed, Scopus and other databases, but there is considerable room for improvement. Furthermore, the invitation of high caliber scientists to publish reviews and expert opinions may go a long way in attracting readers to a journal. The final issue concerns how the flood of new articles under open access schemes – some, unfortunately, still of low quality – risk masking those publications of a high caliber. This might be best combated by introducing some form of common standards across the open access platform concerning publication quality.

The open access publishing initiative is here to stay and is having a positive impact on scientific research in general. The question is how to make open access publishing more financially accessible whilst retaining high scientific standards. However, as Dr. M. Leptin (the director of EMBO in Heidelberg, Germany) recently stated; “The economics of open access are crucial, but they should not dominate how we think about scientific publishing” (Science, 2012, 335, 1279).

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