Letter

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Open access is worth considering: a reply to Agrawal

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In a recent letter to Trends in Plant Science, Anurag A. Agrawal [1] outlines his opinions on open access (OA) publishing. In it, he incorrectly conflates OA journals with nonselective journals. Specifically, Agrawal [1] states that 'a publication in an open access journal only imparts [the information that it is] "not scientifically flawed"', and later that OA journals provide "no stamp of rigor or potential impact". Unfortunately this is a common misconception, and we would like to set the record straight: many OA journals are highly selective and high impact.

Table 1. Publication polices of 31 open-access publishers in the biological sciences[a]

Journal	Selection for novelty and/or impact	Impact factor[b]
PLOS Medicine	Yes	15.25
PLOS Biology	Yes	12.69
PLOS Genetics	Yes	8.52
PLOS Pathogens	Yes	8.14
BMC Biology	Yes	6.53
PLOS Computational Biology	Yes	4.87
Genome Biology and Evolution	Yes	4.76
PLOS Neglected Tropical Diseases	Yes	4.57
BMC Genomics	Minor	4.40
BMC Plant Biology	Minor	4.35
Evolutionary applications	Yes	4.15
EvoDevo	Yes	3.91
Frontiers in Zoology	Minor	3.87
PLOS ONE	No	3.73
BMC Evolutionary Biology	Minor	3.29
BMC Bioinformatics	Minor	3.02
Scientific Reports	No	2.93
BMC Genetics	Minor	2.81
BMC Developmental Biology	Minor	2.73
Biology Direct	No	2.72
Evolutionary bioinformatics	No	1.23
Ecology and Evolution	No	1.18
Applications in Plant Sciences	Minor	NA
BMC Ecology	Minor	NA
Ecosphere	No	NA
eLife	Yes	NA
Evolution, Medicine, and Public Health	Yes	NA
Frontiers in Genetics	Yes	NA
PeerJ	No	NA
PLOS Currents	No	NA
F1000 Research	No	NA

[a]Publication policies with respect to whether journals select articles based on novelty and perceived impact. Journals are ranked by impact factor, and those without impact factors are marked 'NA'.

[b]Source: 2012 Journal Citation Reports©, published by Thomson Reuters.

We compiled data on the publication policies and impact factors of 31 popular and reputable OA journals in biology (summarized in Table 1, full version with complete publication policy text available at [2]). This list is far from exhaustive; it includes neither all of the popular and reputable OA journals, nor any of the many unpopular and/or irreputable ones (http://scholarlyoa.com/2014/01/02/list-of-predatory-publishers-2014/). Rather, the list comprises a small selection of journals that serves to demonstrate that many OA journals are both selective and high impact.

Our list reveals a diversity of publication policies, ranging from journals that aim to publish valid science regardless of novelty or likely impact (e.g., *PLOS ONE* or *The PeerJ*), to those that are at least as selective as the most competitive closed access journals (e.g., *PLOS Biology*, *BMC Biology*, and *eLife*). In total, 22 of the 31 journals in our list apply some kind of selection based on novelty and/or likely impact. Many OA journals also lead their fields based on metrics such as impact factors. For example, the first- and fifth-ranked journals in the Institute for Scientific Information's (ISI) 'Biology' category are both OA (*PLOS Biology* and *BMC Biology*, with impact factors of 12.7 and 6.5, respectively), as is the second-ranked journal in the ISI's 'Zoology' category (*Frontiers in Zoology*, impact factor 3.9). In summary, a publication in an OA journal will often convey much more than the information that it is not flawed. And to the extent that impact factors can be used to estimate a publication's future citation rate [3], publications in many OA journals should be judged at least as favorably as those in closed access journals.

We agree with Agrawal that researchers should carefully consider their options when deciding where to publish. The decision affects who will see the work, how it (and the researcher who produces it) will be judged, and the rise and fall of scientific publishing models. It is therefore essential that we are all aware of journals' publishing policies and reputations, both for our own science and in our judgment of others'.

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References

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