The Importance of Peer Review

As Biology Open (BiO) completes its first full year of publication, I would like to take this opportunity to thank all of our reviewers for their hard work (a full list of our reviewers can be found below). All these people have given us their valuable time for free and BiO could not exist without them; we are very grateful for all their efforts.

Peer review is a precious thing. Without it, Open Access journals such as BiO could end up being little more than 'vanity' publishers, publishing more or less any paper because to do so increases profits. Critics of author-pays Open Access are right to point out that such journals exist, but they are wrong to suggest that we will all end up drowning in a quagmire of irrelevant and irreproducible data as a result. Scientists are not fools and any journal that adopted this policy would rapidly lose credibility. For the record, 250 papers were submitted to BiO in 2012; so far, 137 have been accepted and 79 rejected (a rejection rate of ~40%).

Indeed, I would argue that peer review at BiO might actually be more effective than it is at some of the very high-impact factor journals. Our reviewers are asked to focus only on whether the conclusions of a paper are justified by the data presented. I have been amazed at how good our reviewers are at spotting any important deficiencies in a paper and suggesting how these can be addressed – often simply by performing an essential control or by toning down a particular conclusion. It is very rare that we accept a paper at BiO without asking for some changes or additional work to be done, but this is always aimed at ensuring that the conclusions are properly backed up by the data.

Several of our authors have commented on how refreshing it is to be able to write a paper honestly and openly, without having to stretch and/or omit data to ensure that an important and definitive conclusion is reached. As I have discussed before (Raff, 2012), given the extreme pressures on scientists to publish in journals with high impact factors, it is perhaps no surprise to learn that other scientists often find the data published in these journals difficult to reproduce (Begley and Ellis, 2012; Mullard, 2011). Thanks to our reviewers, I am very hopeful that this will be less of a problem for papers published in BiO.

References

Begley, C. G. and Ellis, L. M. (2012). Drug development: raise standards for preclinical cancer research. *Nature* **483**, 531-533.
Mullard, A. (2011). Reliability of 'new drug target' claims called into question. *Nat. Rev. Drug Discov.* **10**, 643-644.
Raff, J. W. (2012). Publishing in the biomedical sciences: if it's broken, fix it! *Biol. Open* **1**, 1055-1057.

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In January 2012, the first issue of BiO was published online. As we mark our first anniversary, we have published 154 articles. None of this would have been possible without the invaluable contribution of the more than 200 peer reviewers.

BiO is demanding of its reviewers in that we ask for reviews to be completed within seven working days. That more than 60% of them do so, with 90% within two weeks, is a testament to their dedication and professionalism.

As Publisher, we recognise the vital nature of the work that they do and acknowledge the fact that peer review is a cornerstone of scientific advancement. In 2011, the UK parliament discussed the issue of rewarding and incentivising reviewers (http://bit.ly/TWYdbG). One way to reward reviewers is to publicly thank them by name. We have chosen the first anniversary of our first issue to do just that. We thank them for their hard work and for managing to fit just one more task into their busy schedules.

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Kristin Artinger, University of Colorado Denver, USA
Sophie Astrof, Weill Medical College of Cornell University, USA
Nafisa Balasinor, National Institute for Research in Reproductive Health, India
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Biology Open 2, 1-5
doi: 10.1242/bio.20134093