

EDITORIAL

The importance of being earnest in post-publication review: scientific fraud and the scourges of anonymity and excuses

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In Act 1 of the Importance of Being Earnest by Oscar Wilde, Lady Bracknell declares, 'To lose one parent, Mr Worthing, may be regarded as a misfortune; to lose both looks like carelessness.'

With increasing pressure to publish in high quality journals and fierce competition, instances of publication misconduct are becoming more apparent. Literature screening services are commonly employed by publishers to identify cases of plagiarism, but fabrication or falsification of results is somewhat more challenging to identify.

Oncogene has first-hand experience of dealing with such cases of publication misconduct, with perhaps the most common case being clear similarities of bands in immunoblots, despite the fact that the bands are supposed to arise from analysis of different samples. There is a small possibility, but it is highly unlikely, that the similarities in appearance would arise by chance.

Oncogene follows Committee on Publication Ethics (COPE) guidelines when dealing with potential cases of misconduct; however, obtaining the information required to resolve such cases is often not without obstacles. Initially, an attempt is made to contact the authors to ask for their response to the allegations. If a paper was published several years ago, authors may have moved institutions and contact details may not be up to date. If a satisfactory response is not received the next step is to contact the institution at which the research was carried out and ask them to formally investigate.

There are many instances where a simple error has been committed. Authors who immediately acknowledge problematic data and endeavor to correct the literature and inform the public about the nature of the infraction should be, and frequently are, recognized for their integrity.

On the other hand, there are many authors who resort to one or more of the following excuses:

- I. 'Nothing to see here. Move along.' Even though the evidence of image duplication or plagiarism is in many cases overwhelming, some authors refuse to admit that there was any problem with their article.
- II. 'My dog ate the data.' Certainly having the original data would help resolve the issues and clearly this excuse has greater validity as more time passes. But sometimes the image manipulation/plagiarism is so evident, that the lack of the original data cannot be an exonerating circumstance.
- III. 'If you look hard enough, you can find a trivial difference between two supposedly duplicated images.' First, the standard should be how likely is it that two images could be so similar and yet have distinct origins. Artifacts that can introduce small differences can occur during image processing. Also, different exposures of the same data can produce apparent image differences; again the standard should be about the probability of similarity.
- IV. 'It was only a control experiment.' How many scientists have not had an unexpected result in a 'control' experiment that actually led to some insight? If control experiments were

unimportant, why were they included in the article in the first place? Connected to this sophistry is: 'The data duplication does not affect the results.' The said error may not affect the main conclusions of the research but all data presented should be considered results. Moreover, identified errors, especially if they occur more than once in a single paper or in several papers by the same author(s) undermine the trust of the Editors in any results presented by the author(s). See the Lady Bracknell quotation.

- V. 'It was the fault of a junior researcher.' This could very well be true. It is sad when the research of a laboratory group is undermined by one unscrupulous person. However it remains to be asked, how did such obvious image duplications escape the attention of the other co-authors? To qualify as an author of a paper one must have approved the final version. If research misconduct was not identified then this does not reflect well on the integrity of, and care and attention paid by the co-authors.
- VI. 'The responsible researcher is from another country and therefore unfamiliar with the standards expected in scientific publications.' First, of course, this argument is highly insulting to the many researchers from other countries who do not engage in such activities. Second, if a laboratory director is concerned about the understanding of standards by researchers in one's group from other countries, then one is responsible for inculcating the proper values into those researchers and displaying an extra level of scrutiny of their products. Again, see the Lady Bracknell quotation.
- VII. 'The results have been replicated by ourselves or others, so the image manipulation is irrelevant.' Data are included in an article for a reason. Science is based upon a certain level of trust, but it is not all-encompassing. If the data do not represent the experiments described, then that trust has been violated, and no rationalization about final outcomes should affect judgment about the culpability of the authors.
- VIII. 'Someone is out to get me.' Perhaps true but irrelevant. By implying that if not for the fact that one was being targeted, the behavior would be considered acceptable, one traduces the entire scientific community. Such practices are neither common nor worthy of toleration.

Authors against which it is alleged that they have committed publication misconduct should have a full right to defend themselves. Some accusations are clearly false, but it is the responsibility of the journal to investigate all allegations made. A few of the excuses listed above may occasionally be valid in some context. Nevertheless most are not acceptable, and further investigation is required.

The alлегers of scientific improprieties also have responsibilities. Adherence to the truth, proper care in analysis, avoidance of judgment-clouding malice and illegal activity are all essential components of the process of making allegations.

Extensive reliance on anonymity undermines confidence in post-publication review. There are legitimate reasons for the protection of the anonymity of whistleblowers and details are not revealed to the concerned parties during investigations. However, it is important that the accuser identifies himself to the publisher when the accusation is made. This does not mean that anonymous

assertions should be ignored; they should be evaluated on their own merits. However, the culture of anonymity is completely inconsistent with the values of both scientific and clinical endeavor and should be discouraged. The more frequently critiques of the literature, or, for example, of clinical medicine, are provided in the open, and the greater number of people who are engaged in this activity in public, the less likely it is that any individual can be successfully targeted for their honest attempts to correct the scientific corpus or to reveal inappropriate medical practice.

In conclusion, it is important that authors, institutions and publishers take the necessary steps, so that resolution of allegations of publication misconduct occur rapidly and fairly, and that invalid arguments do not deter or delay the process. Correction and retraction notices should be published where warranted to inform readers that an issue has been identified. The

overarching outcome should be to correct the scientific literature and avoid future such cases of misconduct arising.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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