

Scientific misconduct

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INTRODUCTION

Brunei International Medical Journal (BIMJ) has made significant strides since it began publication in its new outfit in 2010. This has been so on both fronts - that of recognition and in terms of the number of articles submitted to the journal. ¹ However, as with the course of any journals, it is not unexpected for them to encounter some form of scientific misconduct. On this note, BIMJ too has not been spared from such occurrences. In line with the aim to raise the standards of the BIMJ, the editorial board takes scientific misconduct seriously and would like to address this issue.

WHAT IS SCIENTIFIC MISCONDUCT?

Scientific misconduct can mean many things to different people and the interpretations of the actual meaning can also differ. Scientific misconduct basically means committing misconduct that is seen as causing controversy or harm. It may take the form of breach of patient confidentiality, failure to follow ethical practices and declare competing interests, data manipulation or fabrication, authorship

issues attempts at redundant or duplicate publication and plagiarism. ² Among all these, plagiarism is perhaps the most common form of scientific misconduct.

With the dawn of the era of internet, the number of published scientific journals and articles have increased tremendously. Together with this, there has been an increase in the number of retracted articles. This rise could be due to the pressure to publish for various reasons coupled with easier to detect scientific fraud in this age of digitalisation. ³ Specific computer programmes are available to help detect fraud, such as plagiarism through detection of repeated words or sentences.

PLAGIARISM

Plagiarism is defined as '*the use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing source*'. ⁴ The source of these ideas or words could be abstracts of meetings, application for grants or manuscripts, published or unpublished in electronic or printed format. This may occur at various stages of planning and conducting research, writing and publication. ⁵

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Plagiarism commonly involves the theft in the form of data or text. In the former, data, tables or figures from a previously published article are taken and presented as new and one's own. This constitutes major scientific misconduct or fraud. The latter is by far more common. It is tempting and easy for a new author to 'cut and paste' what has been written before. The reason given for this is often that one could not think of a better way of expressing their ideas. Additionally, there are only a few ways in which a fact can be presented without altering the intended meaning. This problem may be more common with authors from non-English speaking countries. One way of getting round this conundrum is to phrase the sentence in your own way and quote the paper where the idea came from. This can be particularly difficult if there is also a restriction on the number of references per article. This usually depends on the type of manuscripts.

'Self-plagiarism' is a practice where an author uses parts of his previous publication without citing the source. ⁴ This may not be taken as seriously as 'stealing' of ideas and words from other authors but none the less it violates copyright agreement that the author would have signed with the publisher of his or her earlier article.

In a study of duplicate citations detected in Medline using the Déjà vu programme, Errami *et al.* ⁶ found that 0.04% of more than 60,000 Medline abstracts were duplicates. This accounted for 24 articles. Although in absolute terms, this is not many; it is still significant and may skew results of future studies. Even one redundant study can influence the results of a meta-analysis or review. The incidence of 'self-plagiarism' was 1.3%. Analysis of 212 pairs of suspected plagiarised articles revealed that on average, 86% of text, 73% of references and 71% of tables were very similar or identical. ⁷

With the availability of electronic data and information software programmes, it is now easy to detect plagiarism. It may be detected at various stages of processing of the manuscript. Before being processed, the editorial staff may use available software like Déjà vu or www.ithenticate.com to detect text that has been published previously. A reviewer can detect it as he is usually an authority on the subject and would have read similar or related articles. The use of related articles link on 'PubMed' is also one of the ways of detecting plagiarism. If plagiarism is confirmed, the manuscript is usually rejected at this stage itself. Inconsistent writing style, use of American and United Kingdom English

Table 1: Tips to avoid being accused of plagiarism.

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- Provide reference/s for any ideas or statements made in the manuscript. It should be clear to the reader of the manuscript which of the ideas or words are the authors own and which are from other previous work.
 - Paraphrase the original work but its use should be limited to less than 5% of other articles.
 - Use quotation marks when citing text that will lose its meaning if altered or said differently.
 - For larger amount of text, photographs, drawings, obtain permission from the publisher of original work. This should be done before the manuscript is submitted for processing.
 - The above also applies to one's own previous publication to avoid 'self-plagiarism'.
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spellings in the manuscript and disproportionately small number of references are other signs of plagiarism that an experienced reviewer or an editor can detect.⁸

If plagiarism skips detection at the processing stage and the manuscript gets published, it may be reported to the journal office by the authors of previous similar studies or by readers. Scientific misconduct is a serious issue and most journals have a policy in place to take action against authors after proper investigation. In this regard COPE has useful flowcharts online to describe the process.⁵ If found guilty of plagiarism, the author should expect one of the following actions: retraction of the article, information to the head of department and / or institute or non-acceptance of future contributions.

OVERVIEW

It is not difficult to imagine how plagiarism can happen especially for those who are inexperienced and unaware of the ethics of publishing. For most, plagiarism acts had probably been unintentional i.e. the perpetrators were unaware of what they had done is considered as plagiarism. Furthermore, given the ambiguity of the meaning, most perpetrators probably do not appreciate the true meaning of plagiarism. This is especially true for those who are not skilled with putting words to paper.

Currently, many medical programmes have included research as part of their curriculum. Importantly, research and publications are now being encouraged even in traditionally nonacademic institutions such as RI-PAS Hospital. Since the start of the undergraduate medical programme in the Universiti Brunei Darussalam, research and research

collaborations with clinicians have been promoted and encouraged. As such, clinicians who previously did not have any formal teaching or training in research and publication including their ethics will need to be aware of what could be considered as scientific misconduct and plagiarism. Towards this end, the Clinical Research Unit (CRU) and BIMJ will continue to provide assistance through workshops to help authors to avoid the pitfall of plagiarism. The CRU will always be happy to help and we encourage authors to seek us if any assistance is needed.

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NOTES

Useful information for contributors is available on the following website in addition to those mentioned earlier:

- International Committee of Medical Journal Editors: <http://www.icmje.org/>
- Office of Research Integrity: <http://ori.dhhs.gov/>