

Editorial

Ghost Busting, Taking the Sheet Off the Ghost

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Ghost authorship, defined as when an individual has made a substantial contribution to writing, research, or editing of a manuscript, but is neither listed as an author nor appropriately acknowledged in the paper, is a cause for concern in biomedical publishing. A reader needs to be confident that the paper they are reading is the work of those prepared to take responsibility for it.

The question of ghost authorship examines the criteria of what qualifies a person to be an author of a paper. Where does contribution end and authorship begin? The International Committee of Medical Journal Editors (ICMJE) policy is that credit for authorship should occur if the contribution of the prospective author fulfils each of the following four criteria: (1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content; (3) providing final approval of the version to be published; and (added in 2013) (4) agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved¹. But what about individuals who do not meet all these criteria, yet have been substantially involved in the paper? To address this, many of the major general journals [e.g., *New England Journal of Medicine*, *PLoS Medicine* and *British Medical Journal* (BMJ)] have taken a further step to ask authors to confirm that no one has contributed to the paper beyond those named, and that everyone listed as authors have contributed substantially.

Despite all these precautions authors continue to flout the

rules. There have been many papers studying the use of ghost authors and honorary authorship (individuals listed as authors, but who do not meet the relevant criteria) in clinical trials^{2,3,4,5}. The BMJ published a study performed in 2008³ which assessed the prevalence of honorary and ghost authorship in 6 leading general medical journals. Of the papers assessed 21% were found to have evidence of inappropriate honorary authorship, ghost authorship, or both. When their results were compared with a study carried out in 1996⁵, there was a decline in the overall occurrence of honorary authorship and ghost authors (29% and 21%, respectively) but there was no significant change in prevalence of honorary authorship (19% in 1996 compared to 18% in 2008). There was a decline of ghost authorship prevalence in the two studies (8% in 2008 and 11% in 1996) but the problem still exists and, as understanding this depends upon self reporting, the true prevalence may be much higher.

Ghost authorship is not just a harmless shadow over the publishing industry; the ghost in the machine also has clinical implications, an example being the case of Merck and Rofecoxib⁴ where clinical trial manuscripts were authored by sponsor employees but first authorship was often attributed to academically affiliated investigators.

We do not believe that medical writers/medical editing should be banned; they can and do have a legitimate place in assisting the preparation of manuscripts. It is their concealment that is unacceptable.

To combat this issue, at the International Rheumatology Editors meeting at the American College of Rheumatology annual meeting on 27th October 2013, it was agreed by all Editors that ghost authorship papers submitted to any rheumatology related journal is not to be allowed. Individuals involved in the writing, editing, and/or research of a paper must be listed either as an author (if they meet the ICMJE criteria) or under the acknowledgement section. If the latter, their name(s), involvement in the paper, details of any funding provided for their assistance, and the name of the funder(s) should be disclosed. In line with the World Association of Medical Editors recommendations⁶, if authors are discovered to have breached these requirements, a notice will be published identifying the paper as being ghost written, and disclosing the names of the responsible companies and corresponding author. Additionally, the corresponding author's institute will be alerted to the violation, identifying to them the companies involved. Following confirmation of ghost authorship, if the journal in question

is contacted by popular media or government organizations, specific names of those involved will be provided. With this requirement, our aim is to promote good practice to further advance transparency and integrity in scientific publications, removing the spectre of potential manipulation for the benefit and accountability of the rheumatology community.

Rheumatology journals that subscribe to this policy: *Rheumatology*; *The Journal of Rheumatology*; *Arthritis Care & Research*; *Clinical Rheumatology*; *Rheumatology International*; *Arthritis & Rheumatology*; *Journal of Clinical Rheumatology*; *Zeitschrift für Rheumatologie*; *Clinical and Experimental Rheumatology*; *Modern Rheumatology*; *Seminars in Arthritis & Rheumatism*; *Current Rheumatology Reports*; *Inflammation*; *Pediatric Rheumatology*; *Reumatología clínica*.

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