
Correspondence

ARRIVE guidelines

With this letter we would like to ask you to take effective action towards implementing ARRIVE (Animal Research: Reporting of In Vivo Experiments) guidelines. We consider this important from a scientific, societal, as well as an ethical point of view. We stress that this is of importance, not only from an animal welfare perspective, but also in relation to improving the reproducibility of results and translational success rates from animals to humans.

Since 2010, about 400 journals have adopted the ARRIVE guidelines for reporting animal experiments in their instructions to authors. This has been a major first step towards improving the quality of reports on animal studies. However, an evaluation of publication quality in 2014 by Baker¹ demonstrates that the implementation of the ARRIVE guidelines is far from perfect. A further analysis by Malcolm Macleod in 2015² demonstrates that, also in journals with high impact factors, randomisation and blinding in publications on animal studies are still often lacking.

It is good practice to exclude publications from systematic reviews in case these publications do not mention whether randomisation and blinding have been performed in clinical trials. If we would follow this practice for animal studies, few publications would be acceptable for review. Aside from scientific concerns, it is undesirable that so many publications fail the inclusion criteria as this would imply that animals have been used in vain.

The guidelines are designed to improve the reporting of animal research. They are not intended to promote uniformity, stifle creativity, or encourage authors to adhere rigidly to all items in the checklist. Some of the items may not apply to all studies (eg field studies). Rather they provide a checklist that can be used to guide authors preparing manuscripts for publication, and by those involved in peer review for quality assurance, to ensure completeness and transparency.

The academic research organisations and the university medical centres that we represent will encourage their researchers to set up their publications according to the ARRIVE guidelines.

We would like to ask you to take the measures necessary to make sure that all contributions regarding animal studies published in your journal(s) meet the ARRIVE guidelines. In addition, we would like to suggest that all details of the methods applied, as well as storage of individual animal data, should be made available online. We believe that as an editor of an influential high impact factor journal, you can make a difference.

This is for the benefit of science and in the interest of human and animal health and welfare. It will also increase the value of scientific resources spent.

We would appreciate receiving your views on this issue.

KLLM Dittrich

President of the Association of Universities in the Netherlands

JFTM van Dijck

President of The Royal Netherlands Academy of Arts and Sciences

EJ Kuipers

President of The Netherlands Federation of University Medical Centres

References

- 1 Baker D, Lidster K, Sottomayor A, Amor S. Two Years Later: Journals Are Not Yet Enforcing the ARRIVE Guidelines on Reporting Standards for Pre-Clinical Animal Studies. *PLoS Biology* 2014;12(1):e1001756. DOI:<https://doi.org/10.1371/journal.pbio.1001756>
- 2 Macleod MR, Lawson McLean A, Kyriakopoulou A, *et al.* Risk of Bias in Reports of In Vivo Research: A Focus for Improvement. *PLoS Biology* 2015;13(10):e1002273. DOI:<https://doi.org/10.1371/journal.pbio.1002273>

EASE new members

EASE would like to welcome the following new members:

- Helena Vidaurri de la Cruz, México
- Pentti Nieminen, Finland
- Hamid ur Rahman, Pakistan
- Anita Vitullo, Jerusalem
- Ravi Baghel, Germany
- Louise Birrell, UK
- Martin Spiering, USA
- Alison Blyth, Australia
- Are Brean, Norway
- Avi Staiman, Israel
- Cella Carr, UK