National Centre
for the Replacement
Refinement & Reduction
of Animals in Research

NC3Rs gateway – Guidance for preparing a Review article

The aim of this guidance document is to guide NC3Rs funded researchers through the process of preparing a Review article for the gateway. This document should be used in conjunction with the guidance for authors provided by F1000Research on 'Preparing a Review article'.

Scope

Review articles should provide a balanced and comprehensive overview of the 3Rs advancements in a particular field, and discuss issues that have not yet been covered in the same way in the existing literature. The review article should provide an overview of the different 3Rs models/ tools/ technologies currently available in the field, and should be written with a target audience in mind, typically mammalian/ vertebrate model users. The 3Rs relevance and impact of the different models/ tools/ technologies should be embedded throughout the article; from the introduction through to the conclusions, and where appropriate, be supported by metrics.

Format of main body

For most Review articles, the following standard format will be the most appropriate:

- Introduction
- Discussion/ analysis of the recent literature
- Conclusions

Important details to include

- Provide an overview of the different *in vitro/ in vivo/ in silico* approaches that are available.
- For each of the different approaches available, discuss the advantages and limitations of each. Describe the pros and cons of each model/ approach, with regards to the scientific outcomes, the 3Rs implications and practical aspects.
- Clearly describe the current state of affairs in the field and the 3Rs relevance.
- Describe the transferability of the different 3Rs models/ tools/ technologies. Include a careful consideration of the barriers to uptake for other potential end-users and the potential solutions to address/ overcome these.
- Describe the translatability of the 3Rs models/ tools/ technologies to different scientific questions/ remits/ disciplines.
- Consider the measure(s) of success/ acceptance test that could/should be used by prospective end-user(s) who are looking to adopt the 3Rs models/ tools/ technologies. For example, what performance characteristics are needed in order to demonstrate utility and confidence in using the 3Rs model/ tool/ technology to address scientific questions?
- Summarise the scientific and 3Rs benefits of adopting the 3Rs models/ tools/ technologies.
- Quantify the 3Rs impact of the model/tool/technology described, where appropriate. For example, how many animals have been affected/ are no longer used locally (e.g. in your laboratory, department or institution)/ in the UK/ internationally? Has the severity classification of the procedure or model been affected (e.g. from severe to moderate)?

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Research highlights (stand-alone box)**:**

In the manuscript, include a separate section called 'Research highlights'. This feature will provide the reader with a quick, structured overview of the main 3Rs approach described in your article and will illustrate why they should adopt your 3Rs approach both from a scientific and a 3Rs perspective.

Provide concise bullet-point responses to the following questions (multiple bullet-points can be listed for each question, and, if some questions are not applicable to your article they may be omitted):

- What are the scientific benefits?
- What are the 3Rs benefits?
- Are there any practical benefits? For example; cost effective, time, difficulty/ complexity, etc.
- What can the approach be applied to currently?
- What are the potential future applications?

Box template:

Research highlights	
Scientific benefit(s):	
3Rs benefit(s):	
Practical benefit(s):	
Current applications:	
Potential applications:	