



Session V-9: Improving reporting of animal-based research

Session V-9: Oral presentations

V-9-311

Improving the reporting of animal research: The ARRIVE guidelines and ILAR guidance

N. Percie du Sert¹, C. Fletcher², J. Everitt³ and V. Robinson¹

¹National Centre for the 3Rs, London, UK; ²Institute for Laboratory Animal Research, Washington DC, USA;

³GlaxoSmithKline, Research Triangle Park, USA

vicky.robinson@nc3rs.org.uk

The publication of animal studies in research articles is central to many disciplines in biomedicine. Lack of sufficient experimental data in the research literature has both scientific and ethical implications, including the inability to confirm and build on research findings and the unnecessary use of animals in studies that fail to reproduce reported results. Yet most scientific journals provide relatively little specific guidance for authors and reviewers. The NC3Rs (UK) and an ILAR (US) committee believe that scientific reporting is an important component in the system of quality assurance and that journal editors have a role to play in promoting the proper and ethical use of animals in research through the publication of adequate information.

The NC3Rs developed the ARRIVE guidelines as a consensus among scientists, statisticians, research funders, and journal editors. They cover the main aspects of a scientific publication

and make recommendations on the reporting of the study design, experimental procedures, animal characteristics, housing and husbandry, and statistical analysis. The ILAR consensus report provides the evidence-based rationale and references supporting the need for adequate data reporting for the description of research animals and the research animal environment.

Publication of the ARRIVE guidelines and ILAR report is only the beginning. Wide dissemination and uptake are essential. The ARRIVE guidelines were published in eight bioscience journals in 2010 and are now endorsed by a growing number of high-quality journals. Future strategies will include assessing the impact of guidelines on the quality of animal research reporting and revisions to ensure that guidelines evolve and continue to represent consensus.



V-9-717

Improving the reporting of animal research: guidance from the US National Academy of Sciences' Institute for Laboratory Animal Research (ILAR)

C. H. Fletcher¹ and J. Everitt²

¹US National Research Council, Washington DC, USA; ²GlaxoSmithKline Research & Development, Research Triangle Park, USA

frey.x.everitt@gsk.com

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supporting the need for adequate data reporting for the description of research animals and the research animal environment.

The ILAR committee will also consider implementation of reporting guidelines for journals:

- The report will encourage journals to tailor guidelines for their specific area.
- Many journals have limited space for the publication of supplemental information; how can such restrictions be accommodated while at the same time making available the information necessary to ensure the reproducibility of the reported studies?
- What are the challenges and possible approaches to providing supplemental information – e.g., online posting, databases?