

Notes to authors

Scope of the journal

Laboratory Animals publishes papers dealing with all aspects of the use of animals in biomedical research, including: new animal models; laboratory animal microbiology; clinical case reports; descriptions of new or improved research techniques; reports on the influence of environmental and other variables on research results; descriptions of techniques which offer replacements for *in vivo* models; and basic data characterizing the haematology, biochemistry or pathology of new or existing animal models. Papers describing work which involves a reduction in the number of animals that need be used; or which replaces animal models with *in vitro* alternatives; or which represents a significant refinement in methodology, leading to improvements in the welfare or well-being of the animals used, are especially encouraged.

Editorial policy

Papers will only be published if the experimental procedures employed conform with accepted principles of welfare of animals used in science. Wherever possible, the principles used should be those laid down in the European Convention for the Protection of Vertebrate Animals used for Experimental and Other Scientific Purposes and its appendices (<http://conventions.coe.int/treaty/en/treaties/html/123.htm>) and/or the National Research Council Guide for the Care and Use of Laboratory Animals (www.nap.edu/readingroom/books/labrats/index.html). If experimental methodology raises particular ethical or welfare concerns these will be judged by the Editorial Board using current UK legislation (Animals (Scientific Procedures) Act 1986; <http://www.homeoffice.gov.uk/docs/animallegislation.html>) for additional guidance.

The Uniform Requirements for Manuscripts Submitted to Biomedical Journals (<http://www.icmje.org>) will be used as a guide for matters not covered by these Notes to Authors. Letters to the Editor will be considered for publication but only on issues related to the scientific or ethical content of the journal, and authors will be given the opportunity to publish a reply to any letters. All contributions are reviewed by independent referees, and the final decision on acceptance or rejection remains with the Editorial Board. The authors of papers accepted for publication will be required to assign copyright to Laboratory Animals Ltd, and a form for this purpose will accompany the proofs.

Submissions

Manuscripts must be accompanied by a covering letter signed by ALL authors confirming (a) that they consent to publication, and (b) that the paper is not under consideration/accepted for

publication or already published elsewhere. One author should be designated to receive correspondence. Manuscripts should be prepared in accordance with the guidelines below and should be sent by post: one copy should be on floppy disk or CD-ROM (together with digital images of any figures) and three copies printed on paper. They should be sent to:

Editorial Manager, *Laboratory Animals*,
The Royal Society of Medicine Press Limited,
1 Wimpole Street, London W1G 0AE, UK (Tel
+44 (0)20 7290 2923; Fax +44 (0)20 7290 2929).

News items for the Notes and Comments section (one copy only) and *books for review* should be sent to: Dr B. R. Howard, Notes and Comments Editor, *Laboratory Animals*, c/o The Royal Society of Medicine Press Limited, as above (Fax +44 (0)114 271 2595; E-mail: commentsla@ncl.ac.uk). For guidelines see <http://www.lal.org.uk/notesforcont1.html>.

Style and format

Manuscripts may be prepared using any word-processing software, but see below regarding the requirements of submission. Use double-spaced, unjustified text throughout, with subheadings in bold upper and lower case (not underlined). Press ENTER *only* at the end of each paragraph, each subheading, and each entry of a list. Avoid using footnotes and automatically numbered notes and paragraphs. Tables and the list of figure legends should appear on separate pages at the end of the manuscript. Please number all pages consecutively. The text file (incorporating all tables and the figure legends, but *not* the figures themselves) must be exported (or 'saved as') a Word document or an RTF file (i.e. 'rich text format'). Figures must be submitted as high-quality, 'camera-ready' artwork. Line figures should be included on disk as TIFF files or in WMF format (i.e. as 'Windows meta-files'); photographic images should be included as separate TIFF files at a resolution of 300 dpi.

The first page should contain (1) the full title of the paper; (2) a short title of not more than 40 characters for page headings; (3) the initials and last names of all authors; (4) the department(s) and the institution(s) where the work was carried out; (5) the name, postal and email addresses, and telephone and fax numbers of the author responsible for all communications about the manuscript and proofs.

All manuscripts should include a short Summary and a list of up to five keywords. The first heading after the Summary (usually Introduction) is omitted. Where appropriate, the remainder of the paper should be arranged under the headings Materials and methods, Results, Discussion, Acknowledgments, References.

Abbreviations and conventions

Abbreviations must be defined in full at their first mention in the text. The 24h clock should be used for times and SI units should be used for all other measurements. References to animal strains should be in accordance with current nomenclature; e.g. *The International Index of Laboratory Animals*, 6th edn (edited and published by M.F.W. Festing, 1993); Mouse Genome database (<http://www.informatics.jax.org/>); Rat Genome Database (<http://ratmap.gen.gu.se/>).

Materials and methods

Reports on animal experiments should include detailed information on the animals and conditions of husbandry (see *Laboratory Animals* (1985) **19**, 106–8 or (2000) **34**, 131–5; <http://www.lal.org.uk/guidelines.html>).

Animals

Species. Genetic status: strain; outbred; hybrid; mutant. Source. Age and/or weight at start of experiment. Sex. Microbiological status. Quarantine or acclimatization period. A brief statement describing the legislative controls and if applicable the protocol review used to ensure responsible animal care and use should be provided.

Husbandry during experiment

Measures to protect microbiological status. Housing equipment. Number of animals per cage or housing unit. Bedding: type, quality, pre-treatment. Environmental temperature. Relative humidity. Lighting schedule. Ventilation and filtration. Measures to refine experimental techniques to benefit animal welfare can be described in detail.

Feeding

Feed: type and composition (according to *Journal of Nutrition* (1977) **107**, 1340–8, and *Journal of Nutrition* (1984) **114**, 15–16); pretreatment; feeding schedule. Water: type; quality; pretreatment; watering schedule.

Experimental procedure

The description of the experimental procedure depends on the purpose of the experiment, but the following information must always be provided: Number of animals and any pre-treatment; Time schedule of the experiment (e.g. time of day of the investigation, time interval between sampling and processing); Products used (e.g. drugs, equipment, feed, bedding), which should be described in this format: 'generic description (trade name, vendor name, city and country where vendor located)'. The disposition of the animals at the end of the experiment should be clear. If euthanasia is performed the method should be clearly specified and acceptable (see *Laboratory Animals* (1996) **30**, 293–316 & (1997) **31**, 1–32; <http://www.lal.org.uk/guidelines.html>).

Statistical procedures

An indication of measures to predict and use only appropriate numbers of animals should be given. Pre-test power analyses should be presented in justification of sample size (number of animals) required, minimum detectable difference possible, etc., whenever possible. Power analyses for many common statistical procedures (parametric and non-parametric) are given in *Biostatistical Analysis*, 4th edn, by J. Zar (1999, Prentice Hall; www.prenhall.com) and computer software (for reviews see *Laboratory Animals* (1996) **30**, 283–5; *Bulletin of the Ecological Society of America* (1997) **78**, 126–9).

When reporting, in the text or figures, variability about the mean, variances, and/or discussing significance or non-significance of statistically derived values, the recommendations of Zar (1999) should be considered, and claims of statistical non-significance should be accompanied by post-test power analyses whenever possible.

Acknowledgments

Only those who made substantial contributions to the study and/or preparation of the paper should be acknowledged. The source(s) of grant support, equipment and drugs should be included.

References

Only essential references should be included and authors should verify them against the original documents. The Harvard system should be used: cite authors' names and dates of publication in the text, and provide a list of references at the end arranged alphabetically by author name. Where there are 3 or more authors, the text citation should be the name of the first author followed by *et al.* References to several works by the same author(s) published in the same year should be differentiated by letters *a*, *b*, etc.

The list of references should include the following information:

For journals: Surnames and initials of **all** authors (date) Title of article. Name of journal in full, volume number, first and last page numbers e.g. Hunskaar S, Fosse RT (1993) Allergy to laboratory mice and rats: a review of its prevention, management and treatment. *Laboratory Animals* **27**, 206–21

For a book: Surnames and initials of all authors (date) Title of book, edition number. Town of publisher: name of publisher e.g. Flecknell PA (1996) *Laboratory Animal Anaesthesia*, 2nd edn. London: Academic Press

For a chapter in a multi-author book: Surnames and initials of all authors of the chapter (date) Title of chapter. In: Title of book (surnames and initials of all book editors). Town of publisher: name of publisher, first and last page numbers of chapter

e.g. Wagner JE (1987) Parasitic diseases. In: *Laboratory Hamsters* (Van Hoosier GL Jr, McPherson CW, eds). Orlando: Academic Press, pp 135–56

Papers accepted for publication but not yet published should be included in the list of references, followed by '(in press)'. Papers in preparation, personal communications and unpublished observations should be referred to as such in the text only.

Tables

Tables should not duplicate information given in the text or illustrations. The tables feature of the word processor should be used to prepare them. They should be numbered in the order in which they are mentioned in the text, each be given a brief title, and each appear on a separate page at the end of the manuscript as part of the text file. Vertical rules and/or background shading should not be used.

Illustrations

All illustrations (Figures) should be black and white, and should be numbered in the order in which they are mentioned in the text. The figures must be saved in separate files and printouts of these appended to the manuscript. All illustrations should be provided in 'camera-ready form' with redundant areas removed. Line 'drawings' should be professionally prepared and labelled (freehand lettering is not acceptable). Charts (e.g. histograms and graphs) may be supplied as Excel spreadsheets (preferably one spreadsheet per chart). Other line figures (e.g. maps and flow charts) should be supplied as TIFF files or in WMF format. Photographic images should be supplied as TIFF files at a resolution of at least 300 dpi. Micrographs should have a bar to indicate the magnification. Any lettering/numbering should be sufficiently large to ensure legibility

after reduction for publication, i.e. reduction to a width of 69mm (one column width) or 142mm (page width). One set of black and white photographs (labelled on the back with the Name of the author, Fig number, short title of paper and date of submission) should be supplied for any images on the disk that are not line 'drawings'.

The list of figure legends (one for each Figure) should appear on a separate page at the end of the manuscript as part of the text file. Staining techniques and the magnification of micrographs should be stated, and arrows/abbreviations explained. Any illustrations previously published should be accompanied by the written consent of the copyright holder to replication, an acknowledgment included in the legend and the full reference included in the list.

Colour illustrations can be included, but the additional costs involved will be at the authors' expense.

Proofs and Offprints

Proofs will be sent electronically to the designated author and must be returned promptly by fax or post; corrections should be kept to a minimum. Fifty free offprints of each article will be supplied; additional offprints may be ordered from the publisher when the proofs are returned. Orders received after this time cannot be fulfilled. Address business correspondence to the Editorial Manager, *Laboratory Animals*, The Royal Society of Medicine Press Limited, as above.

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