

Aims and Scope

The aim of this international journal is to accelerate progress in laboratory animal experimentation and disseminate relevant information in related areas through publication of peer reviewed *Original papers* and *Review articles*. The journal covers basic to applied biomedical research centering around use of experimental animals and also covers topics related to experimental animals such as technology, management, and animal welfare.

NOTES FOR AUTHORS

1. Unpublished *Original papers* and *Review articles* related in principle to laboratory animal science are accepted. *Full papers* and *Notes* in the previous 'Notes for Authors' have been unified as *Original papers*, the style of which should follow the rules mentioned below. Brief data reports are no longer accepted. Texts must be written in proper English. All the papers are reviewed by the referees. Papers are selected for publication according to editorial assessment of their suitability and reports from individual referees. Papers will be rejected if the ethics in the care and use of animals have not been clearly stated in the text. (See "Guidelines for Proper Conduct of Animal Experiments"; <http://www.scj.go.jp/ja/info/kohyo/pdf/kohyo-20-k16-2e.pdf>)
2. Except for authors invited by the Editorial Board to submit a *Review article* (all charges for publication are exempted for non-member contributors in this case), the top author will be charged ¥20,000 for publication unless he/she is a member of the Japanese Association for Laboratory Animal Science.
3. Papers must be submitted through the electronic submission system ScholarOne Manuscripts™, <http://mc.manuscriptcentral.com/ea>, (hereafter referred to as SM). Any papers and inquiries in writing will not be accepted.
4. Papers should be sectioned into: a) Text (Main document), b) Figures, c) Tables, and d) Abstract in Japanese, then submitted electronically through SM.
5. Naming of the files for submission
'Author' should be the family name of the first author.
 - 1) Text (Main document): Author.doc
 - 2) Figures: Author_Fig1.tiff (The file extension is an example only; please use the file extension appropriate to the file type.)
 - 3) Tables: Author_Table1.xls
 - 4) Abstract written in Japanese: Author_Abst_J.pdf
 - 5) Cover letter: Author_cov.docNote: Numbers of Figures and Tables should be presented in this letter. This document will be separately uploaded as directed by SM.
Note: The size of all files for submission should not exceed 20 MB.
6. **Text (Main document)** This file should contain the Title/Cover page, Abstract, Introduction, Materials and Methods, Results, Discussion (the Results and Discussion sections can be combined, although the Editorial Board does not prefer the combined style), Acknowledgments, References and Figure Legends. Authors are recommended to compile this file in Microsoft Word™ using only standard fonts: e.g. Century, Helvetica, Symbol and Times New Roman. The Main document should be prepared as indicated below.
 - 1) In the top margin of the **first page** of each Text (Main document), one of the following special categories should be notified as the special field of the paper: *Anatomy, Animal breeding, Animal welfare, Bacteriology, Biochemistry, Bioresource, Environments, Equipment, Ethology, Experimental methods, Genetic engineering, Genetics, Histology, Hygiene, Immunology, Management, Model animals, Nomenclature of gene and strain, Nutrition, Parasitology, Pathology, Pharmacology, Physiology, Reproduction, Reproductive engineering, Toxicology, Virology*.
 - 2) The upper half of the first page should also include an indication of either *Original paper* or *Review article*, title, running head, authors' names and addresses with the postal code of the institution where the work was done. The corresponding author, his address and e-mail address should be added. The running head not exceeding 40 letters should be presented in capital letters. The lower half of the page should be left blank.
 - 3) **The second page** should contain an abstract (240 words or less) and key words (5 or less in alphabetical order).
 - 4) The contents of papers **on and after the third page** of *Original papers* should in principle follow the order described above.
 - 5) Lines of text should be double spaced (ca. 24–26 lineage per page) on A4 pages with adequate margin spaces on the four sides. The main text should be paginated and all lines should be numbered consecutively in the left margin.
 - 6) Proper nouns should begin with a capital letter. The scientific names of animals, plants and microorganisms must be written in italics or underlined.
 - 7) In the paper, Arabic numerals should be used for quantitation. Metric units should conform to The International System of Units (SI) (e.g., m, mm, μ m, nm, l, ml, μ l, kg, g, mg, μ g, ng, pg, h, min, s, °C, rpm, Hz, Bz, %, ppm, pH, J, lx, and dB).
 - 8) Abbreviations, except metric units and those listed below, should be written in parentheses after the full term at their first appearance in the paper: CD, cDNA, DNA, ELISA, Ig, IL, ip, mRNA, no., PBS, PCR, RT-PCR, RNA, SPF, SD, SE, SEM.
 - 9) **References** should be arranged in the alphabetical order of the authors' surnames and numbered consecutively. In the text they should be cited by numbers, e.g. [1, 3–5, 7]. The abbreviations of titles of periodicals should conform to ISO 4-1972 (E): Documentation International Code for the Abbreviations of Titles of Periodicals, and ISO 833-1974 (E): Documentation International List of Periodical Title Word Abbreviation.
The following are examples of References.
 1. Bloom, W. and Fawcett, D.W. 1969. A Textbook of Histology, 9th ed., B.W. Saunders, Philadelphia.
 2. Han, J.S., Sugawara, Y. and Doi, K. 1992. Rapid induction of glomerular lipidosis in APA hamsters by streptozotocin. *Int. J. Exp. Path.* 73: 75–84.
 3. Nakayama, A. 1978. Rhythm of the body temperature. pp. 140–154. In: Biorhythm and its mechanisms (Suda, M., Hayaishi, O. and Nakagawa, H. eds.), Kodansha, Tokyo (in Japanese).
 7. **Tables** Authors are requested to prepare their Tables in Microsoft Excel™ format, one Table per file, with the Table appearing in "Sheet1" of each file. On Tables, no vertical line should be used and each term or phrase should begin with a capital letter. Any explanation essential to the under-

- standing of the Table should be given as a footnote at the bottom of the Table. Reference to the footnote should be designated by symbols in the order a), b), c).
8. **Figures** One image file should be submitted for each figure. Acceptable formats are: EPS, JPEG, PPT and TIFF. Photographs should only be submitted in JPEG or TIFF formats. Please do not use PDF files for figures. Authors are reminded that Figure Legends should be included in the Text file (see above) and should not appear in the Figure file. Submitted figures will be automatically rendered by SM into PDF files, and authors are requested to check the quality of these PDF images generated by SM. Figures will appear in the print edition with a width of 77 mm or 160 mm, and we require a resolution of 1,200 dpi for black and white figures, and 350 dpi for grayscale or color figures at these widths. Authors are requested to refrain from submitting blurred or undersize images. Color figures in PDF files will be displayed in RGB (red, green, blue: LCD/CRT monitors) mode for the editorial review process, and on J-Stage. For the print edition RGB is digitally converted to CMYK (cyan, magenta, yellow, black: the print colors) and this sometimes results in colors not being properly reproduced in the print edition; images of green fluorescence are particularly affected by this problem. When problems occur with color reproduction, authors will be asked to resubmit the affected figures rendered in CMYK after acceptance of their paper. For micrographs, authors should include a bar on the photograph and give its equivalent size in the legend. All the Figures should be numbered in consecutive order.
 9. **Supplementary data** Supplementary data are also accepted. Supplementary data are image data including Figures, Tables, Text (bmp, gif, jpeg, jpg, tiff, rgb, xbm, xwd, and pdf formats) and Video (mpeg, mpg, mpe, qt, mov, avi, movie, igs, iges, msh, mesh, silo, wrl, vrm, and wmv formats) with their legends. When authors submit supplementary data, careful proof-reading is recommended. No corrections are acceptable after acceptance of the paper. As supplementary electronic data, J-Stage can accept and make available to the public (or readers) 5 files at most, each of which cannot exceed 80 MB. However, when submitted to SM, the submitted files cannot exceed 20 MB in total. No video files can be accepted in a submission because SM is not equipped for video reproduction and video files often exceed the limit of 20 MB. For the review process of a submitted paper(s), authors should tentatively prepare a shared disc that is accessible through the internet, store the file(s), and display the URL(s) in the text as 'Supplementary data—video files'. The same procedure is required when more than 20 MB in files are submitted as supplementary data. After acceptance of the paper, video files (up to 80 MB) will also be incorporated into J-Stage as supplementary data.
 10. **Deposition of sequences and of expression data** New sequence information must be deposited to the appropriate database prior to submission of the manuscript. All sequence names and the accession numbers provided by the databases should be described in the Materials and Methods section of the manuscript.
 11. **Abstract in Japanese** If one or more of the authors is Japanese, an abstract written in Japanese (600 letters, as a summary) should also be submitted. This file should be submitted in PDF format. It should include the title, authors and the institution where the work was done.
 12. **The length of papers**, including Tables, Figures and any other appendices, should not exceed 12 printed pages. One printed page containing no title, tables, or figures may contain around 850 words.
 13. Publication is in principle in the order of acceptance after refereeing.
 14. The author will be charged the following expenses.
 - 1) Revising English language when the Editorial Board regards it necessary.
 - 2) Typesetting and printing of the portion of the text exceeding 4 printed pages (At present, ¥15,000 per 1 printed page).
 - 3) Tracing charge when the Editorial Board regards it necessary.
 15. The journal is to be issued quarterly in January, April, July and October.
 16. All charges to authors (See Item 14) should be paid by international money order or by check payable to the "Japanese Association for Laboratory Animal Science".
 17. The copyright for articles appearing in *Experimental Animals* is held by the Japanese Association for Laboratory Animal Science.
 18. **Prohibition of dual submission** Dual submissions are strictly prohibited. To preclude dual submissions, corresponding author(s) must state that no dual submission has been made in a cover letter with the author(s)' signature(s). No submission will be accepted without a cover letter. If evidence of a dual submission is found, the Editor-in-Chief has the right to immediately withdraw the paper without giving any notice to the authors; the Editor-in-Chief will also publish evidence of the dual submission with autonym in *Experimental Animals*.
 19. Copy protection in making PDF files for articles has been abandoned, but JALAS still maintains the copyrights of all published in 'Experimental Animals'.
 20. PDF files containing the full contents of *Original paper* or *Review articles* will be uploaded to the J-Stage as early as the time of acceptance.
 21. A photograph associated with the best papers in each issue can be displayed on the 'Journal Cover'.
 22. When any NBRP (National BioResource Project in Japan) bioresources are used, the ID numbers and/or institution names should be included in the paper.
 23. The authors are strongly encouraged to share materials used in the experiment with qualified researches after publication, either through the author's laboratories or depositing in appropriate repositories such as core facilities of National BioResource Project (NBRP) of Japan.

Notice about photocopying

In order to photocopy any work from this publication, you or your organization must obtain permission from the following organization which has been delegated for copyright for clearance by the copyright owner of this publication.

Except in the USA

Japan Academic Association for Copyright Clearance, Inc. (JAACC)
6-41 Akasaka 9-chome, Minato-ku, Tokyo 107-0052 Japan
TEL: 81-3-3475-5618 FAX: 81-3-3475-5619
E-mail: info@jaacc.jp

In the USA

Copyright Clearance Center, Inc.
222 Rosewood Drive
Danvers, MA 01923, USA
Phone: (978) 750-8400 Fax: (978) 646-8600
www.copyright.com

Experimental Animals is available online.

<https://www.jstage.jst.go.jp/browse/expanim>
<https://www.jstage.jst.go.jp/browse/expanim/-char/ja/> (in Japanese)

The Guidelines of International Nomenclature

The information of animals, strains, genes, etc, appearing in papers submitted to the official journal *Experimental Animals*, should be given according to the rules and guidelines of international nomenclature. For this reason, authors are required to implement the nomenclature. The editorial board advises authors to refer to the information below, when preparing a manuscript for submission to *Experimental Animals* for publication.

The current nomenclature applied to mice and rats follows the rules and guidelines established by the *International Committee on Standardized Genetic Nomenclature for Mice*. This nomenclature will be applied to other experimental animals, too.

1. Scientific name of experimental animals

The scientific name of animals used in animal experimentations should be given.

Examples:

- a. Mouse: *Mus musculus musculus*
- b. Rat: *Rattus norvegicus*

2. Breeder's name or Institute's name

The official title of the Breeder or Institute from which the experimental animals originated or were purchased should be given.

- a. Use of "in-house" or "domestic", is recommended, if the animals originate from the author's animal facility.
- b. The official title should be referenced from the home page or brochure (pamphlet) issued by the Breeder or Institute.

3. Strain name

- (1) Names of strains distributed by commercial breeders should be referenced from the Breeder's home page or brochure (pamphlet).
- (2) Names of newly bred strains should be given according to international nomenclature and international index of experimental animals.

Home page of Rules and Guidelines for Nomenclature of Mouse and Rat Strains:

<http://www.informatics.jax.org/mgihome/nomen/strains.shtml>

<http://rgd.mcw.edu/nomen/nomen.shtml#StrainNomenclature>

Home page of the Index of Major Mouse Strains:

<http://www.informatics.jax.org/external/festing/mouse/STRAINS.shtml>

Home page of the Index of Major Rat Strains:

<http://www.informatics.jax.org/external/festing/rat/STRAINS.shtml>

<http://rgd.mcw.edu/strains/>

4. Genes, Genetic Markers, Alleles, and Mutations

Scientific and formal names of genes and proteins should be found in Mouse Genome Informatics (MGI) and Rat Genome Database (RGD).

MGI home page: <http://www.informatics.jax.org/mgihome/nomen/gene.shtml>

RGD home page: <http://rgd.mcw.edu/nomen/nomen.shtml#StrainNomenclature>

5. Laboratory code (Lab code)

A Laboratory Code is a code of usually one to four letters (first letter is upper case, followed by lower case letters), that identifies a particular institute, laboratory, or investigator that produced, and may hold stocks of a DNA marker, an animal strain, or a mutation. Laboratory codes are also used in naming chromosomal aberrations and transgenes.

Examples:

- (1) C3H/HeH: Mouse substrain derived at Harwell (H) from the Heston (He) substrain of C3H
- (2) *D8Mit17*: A DNA segment that has the 17th locus mapped to mouse Chromosome 8 by MIT

Institute for Laboratory Animal Research (ILAR)

Home page for search: http://dels.nas.edu/ilar_n/ilarhome/search_lc.php

Home page for registry: http://dels.nas.edu/ilar_n/ilarhome/register_lc.php

6. Miscellaneous

- (1) Full translations and comprehensive explanations of nomenclatures translated to Japanese are available at the following address.
<http://cardb.cc.kumamoto-u.ac.jp/transgenic/index.jsp>
- (2) "Godfather" as a naming tool is available at the following address for learning nomenclatures.
<http://www.shigen.nig.ac.jp/tools/godfather/index.jsp?lang=japanese>

Note

The implementation of the nomenclature is carried out at the following databases, MGD (Mouse Genome Database), IMSR (International Mouse Strain Resources), CARD (Center for Animal Resource and Development at Kumamoto University), BRC (RIKEN BioResource Center), EMMA (European Mouse Mutant Archive), RGD (Rat Genome Database) and NBRP-Rat (National Bio Resource Project for the Rat) through each Genetic Nomenclature Committee.

Policy on Animal Experimentation

Japanese Association for Laboratory Animal Science (November 1, 2007)

The Japanese Association for Laboratory Animal Science (JALAS) was established for the purpose of advancing laboratory animal science and related areas through the promotion of basic and applied research and the dissemination of relevant information concerning laboratory animals, thereby contributing to the development of science in Japan.

Animal experimentation is an essential part of research, education and testing in such fields as medicine and the life sciences. JALAS members should comply with the Law for the Humane Treatment and Management of Animals as well as the Standards Relating to the Care and Management of Laboratory Animals and Relief of Pain. Furthermore, they should conform

to the internationally accepted "3R" (Replacement, Reduction, and Refinement) principle in accordance with the Fundamental Guidelines for Proper Conduct of Animal Experiment and Related Activities compiled by the related ministries as well as the Guidelines for Proper Conduct of Animal Experiments stipulated by the Science Council of Japan.

JALAS began raising the awareness of its members as to the importance of laboratory animal welfare by promulgating the Guidelines for Animal Experimentation in 1987 and publishing a handbook for the Guidelines. JALAS will remain committed to the promotion of the proper conduct of animal experimentation under voluntary management in Japan.