DESCRIPTION

Journal of Veterinary Behavior: Clinical Applications and Research is an international journal that focuses on all aspects of veterinary behavioral medicine, with a particular emphasis on clinical applications and research. Articles cover such topics as basic research involving normal signaling or social behaviors, welfare and/or housing issues, molecular or quantitative genetics, and applied behavioral issues (eg, working dogs) that may have implications for clinical interest or assessment.

JVEB is the official journal of the Australian Veterinary Behaviour Interest Group, the British Veterinary Behaviour Association, Gesellschaft für Tierverhaltensmedizin und Therapie, the International Working Dog Breeding Association, the Pet Professional Guild, the Association Veterinaire Suisse pour la Medecine Comportementale, The American Veterinary Society of Animal Behavior, and the American College of Veterinary Behaviorists.

Benefits to authors
We also provide many author benefits, such as free ShareLinks for the first 50 days after publication, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our support pages: https://service.elsevier.com.

AUDIENCE

Veterinarians, Breeders, Trainers

IMPACT FACTOR

2022: 1.800 © Clarivate Analytics Journal Citation Reports 2023
ABSTRACTING AND INDEXING

CAB International
Global Health (Index Veterinarius, Veterinary Bulletin)
PsycINFO
Scopus
Science Citation Index Expanded
Journal Citation Reports - Science Edition
Focus on: Veterinary Science and Medicine

EDITORIAL BOARD

Editor-in-Chief
Karen Overall, University of Prince Edward Island, Atlantic Veterinary College, Charlottetown, Canada

Associate Editors
Matthew Parker, University of Portsmouth School of Pharmacy and Biomedical Sciences, Portsmouth, United Kingdom
Hayley Randle, Charles Sturt University School of Animal and Veterinary Sciences, Wagga Wagga, Australia

Equine, Welfare, Behaviour, Cognition, Social Licence

Editorial Board
Julia Albright, The University of Tennessee Knoxville College of Veterinary Medicine, Knoxville, United States of America
canine, feline, equine, behavior, stress, anxiety, pharmacology

Christine Arhant, University of Veterinary Medicine Vienna, Wien, Austria
Dog welfare, Reducing stress during husbandry/medical procedures, Dog/cats shelters

Bonnie Beaver, Texas A&M University, Department of Small Animal Clinical Sciences, College Station, Texas, United States of America
Domestic animal behavior, Clinical behavior medicine, Animal welfare

Stephanie Borns-Weil, Cummings School of Veterinary Medicine at Tufts University, North Grafton, United States of America
Canine aggression treatment, Impact of early life negative experience in dogs, Psychopharmacology

Walter Burghardt, BluePearl Veterinary Partners LLC, Tampa, United States of America
Working dog behavior, Clinical behavior medicine, Psychopharmacology

Simona Cannas, University of Milan, Milano, Italy
Dogs and cats behavioral medicine, Dogs and cats cognition and emotion, Dogs and cats welfare

Seong-Chan Chan, Seoul National University, Gwanak-gu, South Korea
Small animal behavior, Wildlife, Farm animal behavior and welfare

Sagi Denenberg, North Toronto Veterinary Behaviour Specialty Clinic, Richmond Hill, Canada

Claire Diederich, University of Namur, Namur, Belgium
Ethology, Animal welfare, human-animal relations, behavioural problems

Jaume Fatjo, Autonomous University of Barcelona, Department of Psychiatry and Forensic Medicine, Bellaterra, Spain
Behavioural medicine, Human animal bond, Naturalistic animal models

Bjorn Forkman, University of Copenhagen, Department of Veterinary and Animal Sciences, Frederiksberg, Denmark
Animal welfare, Dog behaviour, Animal personality, Learning

Angelo Gazzano, University of Pisa, Department of Veterinary Sciences, Pisa, Italy
Dog behavior, Animal welfare, Farm animal behavior and welfare

Karina Bech Gleerup, University of Copenhagen, København, Denmark
Naomi D. Harvey, Dogs Trust, London, United Kingdom
Adolescent behavior, Intersection of behavior and health, Guide dog behavior

Katherine Houpt, Cornell University College of Veterinary Medicine, Ithaca, United States of America
Equid behavior, Porcine behavior, Ovine behavior, Clinical behavioral medicine

Iwona Janczarek, University of Life Sciences in Lublin, Lublin, Poland
Horse behaviour, Animal emotional excitability, Associative learning and horse cognition

Tadeusz Jeziorski, Institute of Genetics and Animal Biotechnology Polish Academy of Sciences, Jastrzębiec, Poland
Olfaction, Olfactory behavior, Olfactory detection, Behavior genetics,

Soraya V. Juarbe-Diaz, Courteous Canine, Inc., Lutz, Florida, United States of America
Clinical veterinary behavioral medicine, Anxiety and impulsivity disorders, Working dog behavior and behavioral problems, Vet behavior telemedicine standards, possibilities and pitfalls

AUTHOR INFORMATION PACK 28 Oct 2023 www.elsevier.com/locate/jveb 2
Tiny deKeuster, Ghent University, Ghent, Belgium
Clinical behavioral medicine dog and cat, Link between pain and behavior, Multidisciplinary research dog behavior, Dog bite prevention

Dorota Lewczuk, Institute of Genetics and Animal Biotechnology Polish Academy of Sciences, Jastrzębiec, Poland
Biomechanics, training, breeding and genetics of horses

Frode Lingaas, Norwegian University of Life Sciences, Faculty of Veterinary Medicine, Oslo, Norway
Medical genetics, Behavioral genetics

Xavier Manteca i Vilanova, Autonomous University of Barcelona, Barcelona, Spain
Animal welfare, Farm animal, Wildlife

Chiara Mariti, University of Pisa, Pisa, Italy
Dog communication, Anthrozoology, Pet welfare

Sebastian Daryl McBride, Aberystwyth University Institute of Biological Environmental and Rural Sciences, Aberystwyth, United Kingdom
Cognition, Stereotypy, Abnormal behaviour

Paul McGreevy, The University of Sydney, Sydney, Australia

Christel Moons, Ghent University, Gent, Belgium
Fundamental and applied animal behaviour (not clinical), Animal-based indicators of animal welfare, Learning theory

Niwako Ogata, Purdue University, West Lafayette, United States of America
Biomarkers related topics, Drug efficacy related topics, Dogs, Cats

James Oxley, University of Liverpool, Liverpool, United Kingdom
Dog aggression, dog bites, rabbit behaviour and welfare, human-animal interactions

Clara Palestrini, University of Milan, Department of Veterinary Medicine, Lodi, Italy
Separation related disorders, Emotions, Cognition

Kathelijne Peremans, Ghent university, Medical Imaging Department, Merelbeke, Belgium
Dog behaviour, Neuroimaging, Anxiety disorders, Biomarkers

Leanne Proops, University of Portsmouth, Department of Psychology, Portsmouth, United Kingdom
Equine behavior/cognition, (working) Equid welfare, Anthrozoology, Emotion, Communication, animal cognition, animal behaviour, social cognition

Hayley Randle, Charles Sturt University School of Animal and Veterinary Sciences, Wagga Wagga, Australia
Equine, Welfare, Behaviour, Cognition, Social Licence

Alexander Riek, FLI Institute of Animal Welfare and Animal Husbandry, Celle, Germany
Nutrition, Ruminants, Physiology, Torpor, Adaptation, Hibernation

Yasemin Salgirli Demirbas, Ankara University, Faculty of Veterinary Medicine, Ankara, Turkey
Free-roaming dogs, lateralization, Physiology

Barbara Schöning, Hamburg, Germany
Dog behaviour and training, Horse behaviour and training, Dog/cat/horse welfare

Kersti Seksel, Sydney Animal Behaviour Service, Seaforth, NSW, Australia
Small animal behaviour, Shelter animal behaviour, Vet student education in behaviour

Panagiotis Simitzis, Agricultural University of Athens, Athens, Greece
Farm animals behavior, Welfare, Human animal interaction

Ines Windschnurer, University of Veterinary Medicine Vienna, Wien, Austria
Animal welfare, human-animal relationship, attitudes, small companion animals, cat behaviour, rabbit behaviour, ferret behaviour, social behaviour, behavioural problems

Helen Zulch, Dogs Trust, London, United Kingdom
Behaviour, learning, training, cognition, olfaction, personality, temperament
GUIDE FOR AUTHORS

INTRODUCTION
Please consult this Guide for Authors for further details on the requirements for submitting your paper to *Journal of Veterinary Behavior: Clinical Applications and Research*. The guidelines described in this document should be adhered to carefully, to ensure high-quality and rapid publication of your manuscript.

Aims and scope
*Journal of Veterinary Behavior: Clinical Applications and Research* is an international journal that focuses on all aspects of veterinary behavioral medicine, with a particular emphasis on clinical applications and research. Articles on basic research involving normal signaling or social behaviors, welfare and, or housing issues, molecular or quantitative genetics, and applied behavioral issues (e.g., working dogs) that may have implications for clinical interest or assessment are encouraged. Focus is not restricted by species of interest.

Types of article
1. Original Research Papers (Regular Papers)
2. Review Articles
3. Case Reports
4. Discussion/Roundtable
5. Point/Counterpoint
6. In Brief: Practice and Procedure
7. Short Communication

*Original Research Papers* should report the results of original research. The material should not have been previously published elsewhere, except in a preliminary form.

*Review Articles* should cover subjects falling within the scope of the journal that are of active current interest. They may be submitted or invited. Because of the nature of review papers, scrupulous attention must be paid to relevant attribution and this should be reflected in the literature cited section and in the acknowledgements.

*Case Reports* can focus on any species, but by definition, must include core clinical content. Content can focus on a report of new condition, treatment and follow-up of complex presentations, working with variants of normal versus abnormal behaviors, a report of a familial condition with a proposed mode of inheritance, et cetera, as long as the nature of a case report is respected. The format for case reports, generally, is as follows: Presentation, history and presenting signs, physical and laboratory evaluation and any other diagnostic assessments deemed relevant, diagnosis, treatment, follow-up, summary and discussion, acknowledgements, and references. Laboratory and other data can be appended in tabular form after the references.

*Discussions/Roundtables* can include synopses of, or reports from 'think tanks' or discussion groups, topical issues that have stirred debate, or invited discussion and commentary suggested by members of the Board of Editorial Advisors. Discussion contributions are not peer-reviewed, must be published with attribution, must be more formal than those in list serves, should include citations, where relevant, and may be edited prior to publication.

*Point/Counterpoint* submissions focus on subjects for which there may not be sufficient published data to generate a consensus view, or on approaches that may seem radical to some reviewers. Some papers submitted as "Original Research Papers/Regular Papers" may be published in this section, but independent submission for this section is also encouraged. Papers suitable for this section include those involving specific types of data that would need to be collected to make the case, but which are unavailable, and the case made within the paper justifies their collection.

*In Brief: Practice and Procedure* seeks to forge links between the research and practitioner communities. This section features submissions on common behavioral issues about which practitioners ask, and about techniques and approaches used in different types of research. The hope is that those who come from a research background will learn to appreciate the practical issues facing many who read their articles, and those who come from a more patient-oriented approach will learn to appreciate the nuances and intrigue of key aspects of research.
**Short Communication** A Short Communication is a concise but complete description of a limited investigation, which will not be included in a later paper. Short Communications should be as completely documented, both by reference to the literature and description of the experimental procedures employed, as a regular paper. They should not occupy more than six printed pages (about 12 manuscript pages, including figures, tables and references).

**Page charges**
This journal has no page charges.

**Submission checklist**
You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

**Ensure that the following items are present:**

One author has been designated as the corresponding author with contact details:
- E-mail address
- Full postal address

All necessary files have been uploaded:

**Manuscript:**
- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

**Graphical Abstracts / Highlights files (where applicable)**

**Supplemental files (where applicable)**

**Further considerations**
- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

**BEFORE YOU BEGIN**

**Ethics in publishing**
Please see our information on Ethics in publishing.

**Policy and ethics**
The work described in your article must have been carried out in accordance with

- Uniform Requirements for manuscripts submitted to Biomedical journals [http://www.icmje.org]. A statement should appear in the manuscript that the work has been approved and give details, or state that approval was not required. This statement should appear after any acknowledgements and just before the Reference list.

A signed ethical statement form is required for the following article types: Original Research Paper, Short Communication, Review Article, Case Report, and Case Series. Please click here to download the form, which should be uploaded to the editorial system with all other submission documents.
Unnecessary cruelty in animal experimentation is not acceptable to the Editors of *Journal of Veterinary Behavior*.

**Studies in humans and animals**

If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with *The Code of Ethics of the World Medical Association* (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the ARRIVE guidelines and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, EU Directive 2010/63/EU for animal experiments, or the National Research Council's Guide for the Care and Use of Laboratory Animals and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

**Informed consent and patient details**

Studies on patients or volunteers require ethics committee approval and informed consent, which should be documented in the paper. Appropriate consents, permissions and releases must be obtained where an author wishes to include case details or other personal information or images of patients and any other individuals in an Elsevier publication. Written consents must be retained by the author but copies should not be provided to the journal. Only if specifically requested by the journal in exceptional circumstances (for example if a legal issue arises) the author must provide copies of the consents or evidence that such consents have been obtained. For more information, please review the Elsevier Policy on the Use of Images or Personal Information of Patients or other Individuals. Unless you have written permission from the patient (or, where applicable, the next of kin), the personal details of any patient included in any part of the article and in any supplementary materials (including all illustrations and videos) must be removed before submission.

**Conflict of interest**

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. If there is no conflict of interest this should be stated. This should be listed at the end of the text, after any acknowledgements and just before the Reference list, under a subheading "Conflict of interest statement". See also https://www.elsevier.com/conflictsofinterest.

**Declaration of generative AI in scientific writing**

The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier’s AI policy for authors.

Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

**Disclosure instructions**
Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled ‘Declaration of Generative AI and AI-assisted technologies in the writing process’.

Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.

Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify compliance, your article may be checked by Crossref Similarity Check and other originality or duplicate checking software.

Preprints
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Preprint posting on SSRN
In support of Open Science, this journal offers its authors a free preprint posting service. Preprints provide early registration and dissemination of your research, which facilitates early citations and collaboration.

During submission to Editorial Manager, you can choose to release your manuscript publicly as a preprint on the preprint server SSRN once it enters peer-review with the journal. Your choice will have no effect on the editorial process or outcome with the journal. Please note that the corresponding author is expected to seek approval from all co-authors before agreeing to release the manuscript publicly on SSRN.

You will be notified via email when your preprint is posted online and a Digital Object Identifier (DOI) is assigned. Your preprint will remain globally available free to read whether the journal accepts or rejects your manuscript.

For more information about posting to SSRN, please consult the SSRN Terms of Use and FAQs.

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master", "slave", "blacklist" and "whitelist". We suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Reporting sex- and gender-based analyses
Reporting guidance
For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research’s generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

Definitions
Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth (“sex assigned at birth”), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

Contributors
Each author is required to declare their individual contribution to the article: all authors must have materially participated in the research and/or article preparation, so roles for all authors should be described. The statement that all authors have approved the final article should be true and included in the disclosure.

Authorship
All authors should have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted. The following authorship statements should appear in the manuscript after any acknowledgements and just before the Reference list, under a subheading "Authorship statement"

The idea for the paper was conceived by
The experiments were designed by
The experiments were performed by
The data were analyzed by
The paper was written by

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.
**Article transfer service**

This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation, or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. [More information.]

**Copyright**

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (for more information on this and copyright see [https://www.elsevier.com/copyright](https://www.elsevier.com/copyright)). Acceptance of the agreement will ensure the widest possible dissemination of information. An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations (please consult [https://www.elsevier.com/permissions](https://www.elsevier.com/permissions)). If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases: please consult [https://www.elsevier.com/permissions](https://www.elsevier.com/permissions).

**Copyright**

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see [more information](https://www.elsevier.com/copyright) on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has [preprinted forms](https://www.elsevier.com/permissions) for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete a 'License Agreement' ([more information](https://www.elsevier.com/funding)). Permitted third party reuse of gold open access articles is determined by the author's choice of [user license](https://www.elsevier.com/funding).

**Author rights**

As an author you (or your employer or institution) have certain rights to reuse your work. [More information.]

*Elsevier supports responsible sharing*

Find out how you can [share your research](https://www.elsevier.com/permissions) published in Elsevier journals.

**Role of the funding source**

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication. If the funding source(s) had no such involvement then this should be stated. All sources of funding should be declared as an acknowledgement at the end of the text, (just before the Reference list). Please see [https://www.elsevier.com/funding](https://www.elsevier.com/funding).

**Open access**

Please visit our [Open Access page](https://www.elsevier.com/funding) for more information about open access publishing in this journal.
Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the Language Editing service available from Elsevier's Language Services.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article

Peer review
All submissions will be reviewed by two to three anonymous reviewers to evaluate them for originality, clear statement of a hypothesis, experimental design appropriate for the hypothesis, completeness of methods, and thoughtfulness of the discussion and conclusions that are supported by data. If only two reviews are solicited/received and there is conflict in their assessment, a third review will be undertaken. Authors may name up to five potential reviewers when they submit the manuscript and must provide complete contact information, including e-mail addresses; however, the Editor-in-Chief retains the right to assign different reviewers as deemed appropriate. Appropriate Referees should be knowledgeable about the subject but have no close connection with any of the authors. In addition, Referees should be from institutions other than (and preferably countries other than) those of any of the Authors. You may also suggest reviewers you do not want to review your manuscript, but please state your reasons for doing so.

If an author wishes to appeal an outcome, he/she should contact the Editor-in-Chief in writing and detail his/her concern. Appeals will only be successful if reviews were inadequate or unjust.

PREPARATION

Peer review
This journal operates a single anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of one independent expert reviewer to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

Use of word processing software
It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Lines should be numbered, and authors are encouraged to use 1.5 to 2.0 line spacing.

Article structure
Subdivision - unnumbered sections
Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

Introduction
State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results. Introduction should not exceed 1.5 manuscript pages.

Materials and methods
Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results
Results should be clear and concise.

Discussion
This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid excessive citations and discussion of published literature. Although there are always exceptions, a good rule of thumb is for the Discussion section to not exceed 5 double-spaced manuscript pages and to limit the number of references to no more than 35.

Conclusions
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Essential title page information
- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
- **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.
- **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Highlights
Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Abstract
A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, they must be cited in full, without reference to the reference list. Also, non-standard
or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. Abstracts must be limited to a single paragraph with no more than 2,500 keystrokes (characters plus spaces).

Graphical abstract
Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, ‘and’, ‘of’). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Nucleotide sequences
Submission of a manuscript containing nucleotide sequence information implies that the primary nucleotide sequence data will be deposited in an internationally available depository.

Statistical conventions
Means and standard errors / deviations and, or medians, interquartile ranges, and confidence limits, should be written: 0 ? 10.20 ? 1.01 g, N=15. For significance tests, the name of the test should be noted followed by a colon, the test statistic and its value, the degrees of freedom or sample size (depending on the convention of the test), and the P value. These parts should all be separated by commas. Decimals should not be cited as naked points. In other words, use 0.01, not .01.

Nomenclature and units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. You are urged to consult IUB: Biochemical Nomenclature and Related Documents for further information.

Math formulae
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork
Image manipulation
Whilst it is accepted that authors sometimes need to manipulate images for clarity, manipulation for purposes of deception or fraud will be seen as scientific ethical abuse and will be dealt with accordingly. For graphical images, this journal is applying the following policy: no specific feature within an image may be enhanced, obscured, moved, removed, or introduced. Adjustments of brightness, contrast,
or color balance are acceptable if and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments (e.g. changes to gamma settings) must be disclosed in the figure legend.

**Electronic artwork**

**General points**
- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.
- Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available. **You are urged to visit this site; some excerpts from the detailed information are given here.**

**Formats**
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/halftone (color or grayscale), keep to a minimum of 500 dpi.

**Please do not:**
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

**Color artwork**
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. **Further information on the preparation of electronic artwork.**

**Figure captions**
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

**Text graphics**
Present incidental graphics not suitable for mention as figures, plates or schemes at the end of the article and number them "Graphic 1", etc. Their precise position in the text can then be indicated. See further under Electronic artwork. If you are working with LaTeX and have such features embedded in the text, these can be left, but such embedding should not be done specifically for publishing purposes. Further, high-resolution graphics files must be provided separately.
Tables
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References
JVEB follows Harvard 2 formatting. Authors may find the sites https://www.mendeley.com/guides/harvard-citation-guide and http://www.citethisforme.com/guides/elsevier-harvard2 helpful, in addition to the following instructions:

Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Preprint references
Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Reference style
Text: Refer to the author's name (without initial) and year of publication, followed, if necessary, by a short reference to relevant pages. Examples: "Since Peterson (1988) has shown that..."; "This is in agreement with results obtained later (Kramer, 1989, pp. 12-16)". If reference is made in the text to a publication written by more than two authors, the name of the first author should be used followed by "et al." This indication, however, should never be used in the list of references. In this list, names
of first author and all co-authors should be mentioned. References cited together in the text of the manuscript should be arranged chronologically, starting with the earliest reference and ending with the most recent.

**List:** Arrange alphabetically on authors' names. When the same author has more than one citation, references should be in chronological order starting with the earliest reference and ending with the most recent. If an author's name in the list is also mentioned with co-authors, the following order should be used: publications of the single author, arranged according to publication dates - publications of the same author with one co-author - publications of the author with more than one co-author. Publications by the same author(s) in the same year should be listed as 1974a, 1974b, etc. Examples:

Reference to a journal publication:

Reference to an edited symposium, special issue, etc. published in a journal:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a dataset:

**Journal abbreviations source**
Journal names should be abbreviated according to

**Data visualization**
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

**Supplementary material**
Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, movies, animation sequences, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier Web products, including ScienceDirect: [https://www.sciencedirect.com](https://www.sciencedirect.com). In order to ensure that your submitted material is directly usable, please ensure that data are provided in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. Video files: please supply 'stills' with your files: you can choose any frame from the video or make a separate image. These will be used instead of standard icons and will personalize the link to your supplementary information. For more detailed instructions please visit our artwork instruction pages at [https://www.elsevier.com/artworkinstructions](https://www.elsevier.com/artworkinstructions).
Research data
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

Data linking
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

Data statement
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

Additional information
- For spelling, word formation and divisions, plurals, possessives, meanings and usage, consult the CBE Manual or a current English language collegiate-level dictionary.
- For conflicts between instructions in this Guide and any of the references, the Guide takes precedence. Do not hesitate to contact the Editorial Office in you have any questions about the preparation of your manuscript.

AFTER ACCEPTANCE
Proofs
One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author (if we do not have an e-mail address then paper proofs will be sent by post) or a link will be provided in the e-mail so that authors can download the files themselves. To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Elsevier now provides authors with PDF proofs which can be annotated; for this you will need to download the free Adobe Reader, version 9 (or higher). Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site.
If you do not wish to use the PDF annotations function, you may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list your corrections quoting line number. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of your proof and scan the pages and return via e-mail. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only
be considered at this stage with permission from the Editor. We will do everything possible to get your article published quickly and accurately. It is important to ensure that all corrections are sent back to us in one communication: please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**
The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch. You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com