DESCRIPTION

*IJBCB* publishes original research articles, invited reviews and in-focus articles in all areas of cell and molecular biology and biomedical research.

Topics of interest include, but are not limited to: Mechanistic studies of cells, cell organelles, subcellular molecular pathways and metabolism Novel insights into disease pathogenesis Nanotechnology with implication to biological and medical processes Genomics and bioinformatics

IMPACT FACTOR

2018: 3.144 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING

Elsevier BIOBASE
Current Contents - Life Sciences
Chemical Abstracts
EMBiology
BIOSIS Citation Index
Embase
Current Contents
Current Contents
Current Contents
PubMed/Medline
Research Alert
Scopus
ISI Science Citation Index

EDITORIAL BOARD

*Editor-in-Chief*

Maddy Parsons, King's College London, London, United Kingdom
Senior Editor
Joanna Kargul, University of Warsaw, Warszawa, Poland

Associate Editors
Darryl Knight, The University of Newcastle, Newcastle, New South Wales, Australia
Tin-Lap Lee, Chinese University of Hong Kong, New Territories, Hong Kong
Marja Nevalainen, Medical College of Wisconsin, Milwaukee, Wisconsin, United States
Lene Niemann Nejsum, Aarhus University Department of Clinical Medicine, Aarhus, Denmark

Reviews Editor
Jyrki Heino, University of Turku, Turku, Finland

Genomics In Focus Editor
Joachim Schultze, University of Bonn, Bonn, Germany

Imaging in Focus Editor
Steve Thomas, University of Birmingham, Birmingham, United Kingdom

Medicine in Focus – Cancer Editor

Medicine in Focus – Cardiovascular Editor
Aleksandar Ivetic, King’s College London, London, United Kingdom

Medicine in Focus – Respiratory Editor
Chantal Donovan, The University of Newcastle, Newcastle, New South Wales, Australia

Neuroscience in Focus Editor
David Adams, University of Wollongong, Wollongong, New South Wales, Australia

Organelles in Focus Editor
Werner Koopman, Radboudumc, Nijmegen, Netherlands

Editorial Board

Biochemistry
Barry Halliwell, National University of Singapore, Singapore, Singapore
Yoshinori Moriyama, Okayama University Graduate School of Medicine Dentistry and Pharmaceutical Sciences, Okayama, Japan

Cancer Biology & Medicine
Jonathan R. Brody, Thomas Jefferson University, Philadelphia, Pennsylvania, United States
Susana Godinho, Queen Mary University of London, London, United Kingdom
Kenneth Iczkowski, Medical College of Wisconsin, Milwaukee, Wisconsin, United States
Irmgard Irminger-Finger, Geneva University Hospitals Laboratory of Molecular Gynaecology and Obstetrics, Geneva, Switzerland
Marja Jäättelä, Danish Cancer Society Research Center, København, Denmark
Agnieszka Kobiela, University of Warsaw, Warszawa, Poland
Anthony Koleske, YALE UNIVERSITY SCHOOL OF MEDICINE, New Haven, Connecticut, United States
Silke Meiners, Ludwig Maximilians University Munich, Munich, Germany
Tuomas Mirtti, University of Helsinki, Helsinki, Finland
Dominika Nowis, University of Warsaw Centre of New Technologies, Warszawa, Poland
Shazib Pervaiz, National University of Singapore, Singapore, Singapore
Richard Pestell, Thomas Jefferson University, Philadelphia, Pennsylvania, United States
Shyh-Han Tan, Center for Prostate Disease Research, Rockville, Maryland, United States
George Yeoh, University of Western Australia, School of Biomedical, Biomolecular & Chemical Sciences, Crawley, Western Australia, Australia
Guo-Jun Zhang, Shantou University Medical College, Shantou, China

Cell Biology & Signalling
Josephine Adams, University of Bristol, Bristol, United Kingdom
Ye-Guang Chen, Tsinghua University, Beijing, China
Xiao Han
Kazuei Igarashi, Chiba University, Chiba, Japan
Alex Ivetic, King’s College London, London, United Kingdom
Petr Jezek, Czech Academy of Sciences, Praha, Czech Republic
Scot R. Kimball, Penn State College of Medicine, Hershey, Pennsylvania, United States
Petra Knaus, Free University of Berlin, Berlin, Germany
Cheng-Gee Koh, Nanyang Technological University, Singapore, Singapore
Po Sing Leung, Chinese University of Hong Kong, New Territories, Hong Kong  
Eleanor Mackie, University of Melbourne Faculty of Veterinary and Agricultural Sciences, Melbourne, Victoria, Australia  
Tarik Möröy, Clinical Research Institute of Montreal, Montreal, Quebec, Canada  
Athanasios G. Papavassiliou, National and Kapodistrian University of Athens School of Health Sciences, Athens, Greece  
Philip Poronnik, RMIT University School of Medical Sciences, Bundoora, Victoria, Australia  

**Cellular & Molecular Neuroscience**  
Michael Dragunow, The University of Auckland, Auckland, New Zealand  
Andy Hill, La Trobe University Department of Biochemistry and Genetics, Bundoora, Australia  
Rebecca Lim, The University of Newcastle School of Biomedical Sciences and Pharmacy, Newcastle, New South Wales, Australia  
Colin Masters, The Florey Institute of Neuroscience and Mental Health, Parkville, Australia  
Alistair Mathie, University of Kent, United Kingdom  
Sonja Sucic, Medical University of Vienna Institute of Vascular Biology and Thrombosis Research, Wien, Austria

**Cellular Trafficking & Organelles**  
Kjetil Ask, The Research Institute of St Joe's Hamilton, Hamilton, Ontario, Canada  
Viktor Korolchuk, Newcastle University Institute for Cell and Molecular Biosciences, Newcastle Upon Tyne, United Kingdom  
Fulvio Reggiori, Academic Medical Centre Groningen Department of Biomedical Sciences of Cells and Systems, Groningen, Netherlands  
Daniel Taillardier, INRA Centre Clermont-Ferrand-Theix-Lyon, St Genes Champanelle, France

**Immunology & Microbiology**  
Avery August, Cornell University, New York, United States  
Anthony Clarke, University of Guelph, Ontario, Canada  
Toby Lawrence, Immunology Centre Marseille-Luminy, France  
Joseph Leibovich, Rutgers The State University of New Jersey, New Jersey, United States  
Barry Marshall, The University of Western Australia, Western Australia, Australia  
Marc Ouellette, CHUL Research Centre, Quebec, Canada  
Philippe Pierre, Immunology Centre Marseille-Luminy, France  
Jean-Michel Sallenave, Institute Pasteur, France  
Nathalie Vergnolle, National Institute of Health and Medical Research, France

**Molecular Biology & Genetics**  
Xiang Gao, Nanjing University, Nanjing, China  
Bassem Haddad, Georgetown University Medical Center, Washington, District of Columbia, United States  
Vincent Harley, Prince Henry's Institute of Medical Research, Clayton, Australia  
Krystian Jazdzewski, Medical University of Warsaw, Warszawa, Poland  
Owen Rennert, National Institutes of Health, Bethesda, Maryland, United States  
Isabelle Richard, Genethon, Evry, France  
Qiang Yu, Genome Institute of Singapore, Singapore, Singapore

**Nanomedicine & Imaging**  
Amit Joshi, Medical College of Wisconsin, Milwaukee, Wisconsin, United States  
James Kah, National University of Singapore, Singapore, Singapore  
Gustavo Menezes, Federal University of Minas Gerais, Belo Horizonte, Brazil  
Wouter Verdurmen, Radboudumc, Nijmegen, Netherlands

**Pharmacology & Drug discovery**  
Hugo Arias, California Northstate University, Elk Grove, California, United States  
Rodney Minchin, The University of Queensland School of Biomedical Sciences, St. Lucia, Queensland, Australia  
Soren Moestrup, University of Southern Denmark, Odense, Denmark  
Helen Osborn, University of Reading, Reading, United Kingdom  
Martina Schmidt, University of Groningen, Groningen, Netherlands  
Paul Townsend, The University of Manchester, Manchester, United Kingdom

**Stem Cells & Regenerative Medicine**  
John Pimanda, University of New South Wales, Sydney, New South Wales, Australia  
Huayu Qi, South China Institute of Stem Cell Biology and Regenerative Medicine, Guangzhou, China  
Nina Tirnitz-Parker, Curtin University School of Pharmacy and Biomedical Sciences, Perth, Australia
GUIDE FOR AUTHORS

Your Paper Your Way
We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article.
To find out more, please visit the Preparation section below.

INTRODUCTION
For a description of the journal's aims and scope, please click here.
For the journal's Peer Review Policy please click here
For detailed information on the required format for each article type published in IJBCB (original research papers, Full-length Reviews and In Focus short surveys) please go to "Format Requirements". Authors are urged to use the Preparation checklist for illustrations, see the paragraph Electronic Artwork in this document.
Manuscripts should contain evidence of submission of nucleic acid sequences to appropriate databanks.
Manuscripts should contain a word count.
Should the Editor request a revision, a revised version of the manuscript should be submitted within eight weeks. After this period, the article will be seen as a new submission.

Types of articles
(see Format Requirements)
The journal publishes
• Regular articles (no invitation required, up to 5,000 words)
• Full-length reviews (upon invitation, 5,000 - 7,000 words)
• In Focus articles (upon invitation, up to 2,000 words)
• Commentaries (up to 1,000 words, max 10 references)

Word counts are exclusive of references.

Contact details for submission
For questions on the submission and reviewing process, please contact Joanna Kargul, Senior Editor at ijbcb@ucl.ac.uk.

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 pages on Ethics in publishing and Ethical guidelines for journal publication.

Declaration of interest
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

Submission declaration
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.

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 or as part of a published lecture or academic thesis or as an electronic preprint, see https://www.elsevier.com/postingpolicy), 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. The corresponding author is responsible for the full integrity of the submitted manuscript from its inception to publication. The corresponding author should ensure that all appropriate co-authors and no inappropriate co-authors are included in the paper. He/she should also ensure that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication. To verify originality, your article may be checked by the originality detection service CrossCheck https://www.elsevier.com/editors/plagdetect.

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.

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).

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior
to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

**Author contributions**

For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. [More details and an example](#)

**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 is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. [More information](#)

**Copyright**

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see [more information](#) 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](#) for use by authors in these cases.

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

**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](#) 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 article for publication. If the funding source(s) had no such involvement then this should be stated.

Open access
Please visit our Open Access page from the Journal Homepage for more information.

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

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 English Language Editing service available from Elsevier's Author 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
Please submit your article via http://www.ees.elsevier.com/bc

Referees
Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our Support site. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION
NEW SUBMISSIONS
Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

References
There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct.

Formatting requirements
There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.
Divide the article into clearly defined sections.

**Peer review**
This journal operates a single blind 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 two independent expert reviewers 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. More information on types of peer review.

**REVISED SUBMISSIONS**

*Use of word processing software*
Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). 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.

**Article structure**
The structure of the article differs per article type. Please refer to the "Structure requirements for IJBCB articles" for detailed instructions for each article type.

**Subdivision - numbered sections**
Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

**Appendices**
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

**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 lower-case 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 optional yet highly encouraged for this journal, as they 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 examples here: 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, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

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. Authors can make use of Elsevier’s Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

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.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

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.).

Formatting of funding sources
List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

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 IUPAC: Nomenclature of Organic Chemistry 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).

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.
• Save text in illustrations as ‘graphics’ or enclose the font.
• Only use the following fonts in your illustrations: Arial, Helvetica.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Produce images near to the desired size of the printed version.
• Submit each figure as a separate file.

A detailed guide on electronic artwork is available on our website: https://www.elsevier.com/artworkinstructions

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
Regardless of the application used, when your electronic artwork is finalised, 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: Vector drawings. Embed the font or save the text as 'graphics'.
TIFF: Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
TIFF: Bitmapped line drawings: use a minimum of 1000 dpi.
TIFF: Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is'.

Please do not:
• Supply files that are optimised for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low;
• Supply files that are too low in resolution;
• Submit graphics that are disproportionately large for the content.

Preparation checklist for illustrations
Please ensure that molecular weight markers are included in all immunoblot and gel figures. For comparative studies, all the protein bands must originate from the same gel. Bar graphs must include standard errors or standard deviations. Please avoid over-complicated coding patterns for bars. Micrographs must include scale bars. Appropriately sized numbers, letters, and symbols should be used so they are no smaller than 2.4 mm (10 pt) in size after reduction to a single column width (7.84 cm or 3.085 inches), or a 2-column width (16.5 cm or 6.5 inches). Superscript and subscript characters are included in this rule. Numbers, letters, and symbols used in multi-paneled figures must be consistent. Figures should preferably be drawn to occupy a single column width (7.84 cm or 3.085 inches). Occasionally, the figures may occupy a double column width if such size enhances presentation. Produce images near to the desired size of the printed version. Make sure that the lettering is such that when the figure is in print, the size of the font is the equivalent to, or slightly larger than the text of the journal. Axis labels should be printed with an initial capital letter followed by lower case lettering with units in open brackets. Axis line width should be uniform and 1 pt in thickness. Column and line diagrams should not be boxed or include gridlines. Use a logical naming convention for your artwork files, and supply a separate listing of the files and the software used.
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.

- Color charges in print apply only for regular articles and unsolicited reviews.
- Color in print is free of charge for invited reviews and In Focus articles.

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
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.

Reference links
Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, https://doi.org/10.1029/2001JB000884. Please note the format of such citations should be in the same style as all other references in the paper.

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.

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
Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link: http://open.mendeley.com/use-citation-style/international-journal-of-biochemistry-and-cell-biology

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Reference formatting

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

Reference style

Text: All citations in the text should refer to:
1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
2. Two authors: both authors' names and the year of publication;
3. Three or more authors: first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically, or vice versa.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000).... Kramer et al. (2010) have recently shown ...'

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:
Reference to a journal publication:

Reference to a journal publication with an article number:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a website:

Reference to a dataset:

Journal abbreviations source

Journal names should be abbreviated according to the List of Title Word Abbreviations.

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum 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.
size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in
the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply
'stills' with your files: you can choose any frame from the video or animation or make a separate
image. These will be used instead of standard icons and will personalize the link to your video data. For
more detailed instructions please visit our video instruction pages. Note: since video and animation
cannot be embedded in the print version of the journal, please provide text for both the electronic
and the print version for the portions of the article that refer to this content.

**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**
Supplementary material such as applications, images and sound clips, can be published with your
article to enhance it. Submitted supplementary items are published exactly as they are received (Excel
or PowerPoint files will appear as such online). Please submit your material together with the article
and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to
supplementary material during any stage of the process, please make sure to provide an updated file.
Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option
in Microsoft Office files as these will appear in the published version.

**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. To facilitate
reproducibility and data reuse, this journal also encourages you to share your 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).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and
processed data, video, code, software, algorithms, protocols, and methods) associated with your
manuscript in a free-to-use, open access repository. During the submission process, after uploading
your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley
Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.
Data in Brief
You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to Data in Brief where it will be editorially reviewed and published in the open access data journal, Data in Brief. Please note an open access fee of 600 USD is payable for publication in Data in Brief. Full details can be found on the Data in Brief website. Please use this template to write your Data in Brief.

MethodsX
You have the option of converting relevant protocols and methods into one or multiple MethodsX articles, a new kind of article that describes the details of customized research methods. Many researchers spend a significant amount of time on developing methods to fit their specific needs or setting, but often without getting credit for this part of their work. MethodsX, an open access journal, now publishes this information in order to make it searchable, peer reviewed, citable and reproducible. Authors are encouraged to submit their MethodsX article as an additional item directly alongside the revised version of their manuscript. If your research article is accepted, your methods article will automatically be transferred over to MethodsX where it will be editorially reviewed. Please note an open access fee is payable for publication in MethodsX. Full details can be found on the MethodsX website. Please use this template to prepare your MethodsX article.

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.

AFTER ACCEPTANCE

Online proof correction
Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors. If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF. We will do everything possible to get your article published quickly and accurately. 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. 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. Both corresponding and co-authors may order offprints at any time via Elsevier’s Author Services. 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.