



REDOX BIOLOGY

An official Journal of the [Society for Redox Biology and Medicine](#) and the [Society for Free Radical Research-Europe](#)

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

●	Description	p.1
●	Impact Factor	p.1
●	Abstracting and Indexing	p.1
●	Editorial Board	p.2
●	Guide for Authors	p.4



ISSN: 2213-2317

DESCRIPTION

Redox Biology is a forum for novel research, methods and review articles in **redox biology** in the areas of both **health** and **disease**. Acceptable paper types are research articles (short or full communications), methods, mini-reviews, and commentaries in the following areas: **Nutrition Polyphenolics Cancer Metabolism Cardiovascular Diabetes Inflammation Aging Neuroscience Cell and Molecular Biology Cell Signaling Bioenergetics**

Redox Biology will also consider research articles focused in chemical or biochemical mechanisms of redox biology, if these include data demonstrating effects in physiologically relevant models. Studies of uncharacterized complex mixtures of natural products are not a suitable area of focus for the journal. Studies using commercial, undefined kits as the sole or primary assay for redox related changes which are not validated using other methods will not be considered for publication.

Redox Biology introduces *Graphical Redox Reviews*. These reviews will summarize schematically key concepts, established and novel ideas in redox biology which will be accessible to a broad audience and freely downloaded as PowerPoint slides for use in teaching or conference presentations.

Graphical Redox Reviews ideally should have a format of 3-5 color schemes with a title, short introductory paragraph, extended figure legends, and include up to 20 selected citations.

IMPACT FACTOR

2016: 6.337 © Clarivate Analytics Journal Citation Reports 2017

ABSTRACTING AND INDEXING

Scopus
PubMed Central
EMBASE/Excerpta Medica
PubMed
Science Citation Index
Directory of Open Access Journals (DOAJ)

EDITORIAL BOARD

Editors-in-Chief:

T. Grune, German Institute of Human Nutrition, Nuthetal, Germany
C.G. Kevil, Louisiana State University (LSU) Health Sciences Center, Shreveport, Louisiana, USA

Editors:

S. Lamas, Centro de Biología Molecular Severo Ochoa, Madrid, Spain
H. Van Remmen, Oklahoma Medical Research Foundation, Oklahoma City, Oklahoma, USA

Editorial Board:

S.M. Bailey, University of Alabama at Birmingham, Birmingham, Alabama, USA
J.B. Blumberg, Tufts University, Boston, Massachusetts, USA
M.M. Briehl, University of Arizona, Tucson, Arizona, USA
G.R. Buettner, University of Iowa, Iowa City, Iowa, USA
E. Cadenas, University of Southern California, Los Angeles, California, USA
C. Chen, Chinese Academy of Sciences (CAS), Beijing, China
N. Chondrogianni, National Hellenic Research Foundation, Athens, Greece
M-V. Clement, National University of Singapore, Singapore, Singapore
R.A. Cohen, Boston University School of Medicine, Boston, Massachusetts, USA
V.M. Darley-USmar, University of Alabama at Birmingham, Birmingham, Alabama, USA
K. J. A. Davies, University of Southern California, Los Angeles, California, USA
M.J. Davies, The Panum Institute, Copenhagen, Denmark
M. Dikshit, Central Drug Research Institute, Lucknow, India
J.-C. Drapier, Centre National de la Recherche Scientifique (CNRS), Gif sur Yvette, France
P. Eaton, King's College London, London, England, UK
A.M. English, Concordia University, Montreal, Quebec, Canada
J.A. Enriquez, Centro Nacional de Investigaciones Cardiovasculares (CNIC), Madrid, Spain
G. Figtree, The University of Sydney, Sydney, New South Wales, Australia
H.J. Forman, University of Southern California, Los Angeles, California, USA
C. Fraga, Universidad de Buenos Aires, Buenos Aires, Argentina
B.B. Frei, Oregon State University, Corvallis, Oregon, USA
B. Friguet, Sorbonne Universités, Paris, France
F. Galli, Università degli Studi di Perugia, Perugia, Italy
M.H. Glickman, Technion - Israel Institute of Technology, Haifa, Israel
E.S. Gonos, National Hellenic Research Foundation, Athens, Greece
H. Griffiths, University of Surrey, Surrey, UK
T.M. Hagen, Oregon State University, Corvallis, Oregon, USA
B.G. Hill, University of Louisville, Louisville, Kentucky, USA
T-T. Huang, Stanford University School of Medicine, Palo Alto, California, USA
M. Jackson, University of Liverpool, Liverpool, England, UK
N. K. Özer, Marmara University, Istanbul, Turkey
J. Kim, University of Alabama at Birmingham, Birmingham, Alabama, USA
L.-O. Klotz, Friedrich Schiller University of Jena, Jena, Germany
J. Laranjinha, Universidade de Coimbra, Coimbra, Portugal
A-L. Levonen, University of Eastern Finland, Kuopio, Finland
J. Lundberg, Karolinska Institutet, Stockholm, Sweden
G. Mann, King's College London, London, UK
T. Michel, Brigham and Women's Hospital, Boston, Massachusetts, USA
M.P. Murphy, Medical Research Council (MRC), Cambridge, UK
E. Niki, Human Stress Signal Research Center, Osaka, Japan
P.I. Oteiza, University of California, Davis, Davis, California, USA
M.N. Patel, University of Colorado, Aurora, Colorado, USA
S. Pervaiz, National University of Singapore, Singapore, Singapore
G. Poli, University of Torino, Turin, Italy
R. Radi, Universidad de la República, Montevideo, Uruguay
M. Ristow, Eidgenössische Technische Hochschule (ETH) Zürich, Zurich-Schwerzenbach, Switzerland
J. Sastre, Universitat de València, Valencia, Spain
G. Serviddio, University of Foggia, Foggia, Italy
S. Shiva, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, USA
H. Sies, Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany
J.P.E. Spencer, University of Reading, Reading, UK
D. St. Clair, University of Kentucky, Lexington, Kentucky, USA
R. Stocker, Victor Chang Cardiac Research Institute, Sydney, New South Wales, Australia
P. J. Thornalley, University of Warwick, Coventry, England, UK
M.G. Traber, Oregon State University, Corvallis, Oregon, USA
K. Uchida, Nagoya University, Nagoya, Japan

J. Viña, Universitat de València, Valencia, Spain
L. Virág, University of Debrecen, Debrecen, Hungary
C. Winterbourn, Christchurch School of Medicine, Christchurch, New Zealand
P.G. Winyard, University of Exeter Medical School, Exeter, UK
G. Wondrak, University of Arizona, Tuscon, Arizona, USA
H. Yin, Shanghai Institute for Biological Sciences, Shanghai, China
J. Yodoi, Kyoto University, Kawahara-cho, Sakyo-ku, Kyoto, Japan
J. Zhang, University of Alabama at Birmingham, Birmingham, Alabama, USA
X. Zhu, Case Western Reserve University School of Medicine, Cleveland, Ohio, USA

Founding Editors (2012):

V.M. Victor Darley-Usmar

T. Tilman Grune

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

Redox Biology is a forum for novel research, methods and review articles in redox biology in the areas of both health and disease.

Types of article and Scope

Acceptable paper types are research articles, methods, mini-reviews, and commentaries in the following areas: Nutrition; Polyphenolics; Cancer; Metabolism; Cardiovascular; Diabetes; Inflammation; Aging; Neuroscience; Cell and Molecular Biology; Cell Signaling; Bioenergetics.

Authors are encouraged to present their research findings in as concise a manner as possible so that the key conclusions are made and with sufficient information that it can be reproduced in other laboratories.

Please note there are different open access publication fees for **concise** and **comprehensive** articles. The maximum length for a concise research article is 2000 words excluding graphical abstract, highlights, references, abstract and figure legends with a maximum of four figures with no more than 6 panels per figure. Authors are encouraged to use supplementary data (maximum of 4 figures with up to 6 panels each) to provide supportive information where appropriate.

We recognize that on some occasions a more **comprehensive** research article is warranted and in this case there is no limit on text or figures but the higher publishing fee applies. See Open Access text below.

There are no page restrictions on reviews or other article types but a concise article is preferred and please contact the editors if you plan on exceeding the 2000 word limit listed above.

Studies using commercial, undefined kits as the sole or primary assay for redox related changes which are not validated using other methods will not be considered for publication

Redox Biology will also consider research articles focused in chemical or biochemical mechanisms of redox biology, if these include data demonstrating effects in physiologically relevant models e.g. a minimum of cell culture. Studies of uncharacterized complex mixtures of natural products will not be an area of focus for the journal.

Redox Biology introduces **Graphical Redox Reviews**: These reviews will summarize schematically key concepts, established and novel ideas in redox biology which will be accessible to a broad audience and freely downloaded as PowerPoint slides for use in teaching or conference presentations.

Page charges

This title is fully open access and therefore funded not through library subscription payments but through author fees. If you would like your article to be published open access, but you genuinely cannot afford these fees, then individual waiver requests are considered on a case-by-case basis and may be granted in cases of genuine need. Priority for this waiver programme will be given to applications by authors from countries eligible for the Research4Life programme. See <http://www.research4life.org/institutions.html>.

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](#).

Human and animal rights

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; [Uniform Requirements for manuscripts submitted to Biomedical journals](#). 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 Institutes of Health guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed.

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 conflicts of interest 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 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 originality, your article may be checked by the originality detection service [Crossref Similarity Check](#).

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).

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.

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 an 'Exclusive License Agreement' (see [more information](#) on this). Permitted third party reuse of 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.

Funding body agreements and policies

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of [existing agreements](#) are available online.

Open access

This is an open access journal: all articles will be immediately and permanently free for everyone to read and download. To provide open access, this journal has an open access fee (also known as an article publishing charge APC) which needs to be paid by the authors or on their behalf e.g. by their research funder or institution. Permitted third party (re)use is defined by the following [Creative Commons user licenses](#):

Creative Commons Attribution (CC BY)

Lets others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The open access publication fee for this journal is **USD 1600** for Concise Research Articles, and **USD 2700** for Comprehensive Research Articles, excluding taxes. There are substantial discounts for members of the **Society for Redox Biology and Medicine (SFRBM)** and the **Society for Free Radical Research-Europe (SFRR-E)**. The open access publication fee for society members is **USD 1300** for Concise Research Articles, and **USD 2200** for Comprehensive Research Articles, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

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 WebShop.

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 and copies of the consents or evidence that such consents have been obtained must be provided to Elsevier on request. 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.

Submission

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 source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail.

In order to facilitate and speed up the review process, authors may include the reviews of any earlier submission of the same manuscript to another journal. If the manuscript was rejected by any other journal, the authors should provide a suitable rebuttal, and the Editors of *Redox Biology* will determine whether the article is suitable for publication in *Redox Biology*.

Referees

The journal makes use of single-blind peer-review with multiple referees. A minimum of four suitable potential reviewers (please provide their name, institutional email addresses, and institutional affiliation) should be provided. When compiling this list of potential reviewers please consider the following important criteria: they must be knowledgeable about the manuscript subject area; must

not be from your own institution; at least two of the suggested reviewers should be from another country than the authors'; and they should not have recent (less than four years) joint publications with any of the authors. However, the final choice of reviewers is at the editors' discretion.

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 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.

Nomenclature and abbreviations

Stylistic details must be kept constant. For example, electron spin resonance is abbreviated either ESR or EPR (for electron paramagnetic resonance). Either can be used, but both should be given and stated as equivalent at the first mention. (This is the recommendation of the International EPR Society.) Formulas for radicals follow IUPAC recommendations and contain a superscripted (not centered) large dot that precedes a charge, if any. Thus, superoxide is represented by $O_2^{\bullet -}$, not $O_2^- \bullet$, or some other permutation. The terms reactive oxygen and nitrogen species should be used sparingly but not in titles and in cases where the specific molecule being studied is known e.g. hydrogen peroxide or nitric oxide.

Other examples are HO^\bullet or $^\bullet OH$ (not OH^\bullet), RO^\bullet , ROO^\bullet / $^\bullet NO_2$, $^\bullet CH_2OH$, etc. In the text, names of radicals are preferred, rather than using formulas in the middle of sentences. For names of radicals, use alkoxy, peroxy, and hydroxyl and not alkoxy, peroxy, etc. (correct nomenclature requires the 'l' on the end of radicals, as in methyl, hydroxyl, etc.). Use tert, not t-, etc., for abbreviations. For example, CORRECT: tert-butoxy, sec-peroxy; INCORRECT: t-butoxy, s-peroxy.

Wherever possible, nomenclature and abbreviations should be in accordance with internationally agreed rules. When an enzyme or compound is first mentioned in the text, specification by its code number accompanied by its systematic name (as distinct from its trivial name) is requested by the Editors, but not checked for correctness.

Official names of drugs are preferred to trade names.

Standard three-letter codes for the common amino acids may be used freely and without definition, but the one-letter codes should be restricted to comparisons of long protein sequences. Similar considerations apply to nucleosides and nucleotides. Standard three-letter codes for carbohydrates and for purine and pyrimidine bases may also be used. All other abbreviations should be defined when they first appear in the text. If an extensive list of abbreviations is used, please provide an alphabetical list with definitions followed by the references at the end of the article.

Temperatures denoted by an unqualified degree symbol are assumed to be Celsius. For solution strengths, percentages should be expressed by the sign %, followed in cases of ambiguity by w/w, w/v, or v/v [e.g., 5% (w/v) means 5 g/100 ml].

All non-standard abbreviations should be defined in a footnote.

Graphical abstract

The Editors require graphical abstracts and suggest that amongst the examples given <http://www.elsevier.com/graphicalabstracts>, that examples 3, 4 and 5 best reflect the sort of graphical abstract most suited to this field and journal.

Image manipulations

All Western blots should be presented with molecular weights noted, replicated, quantified and with statistical analysis. Cropping of the image is acceptable but must be clearly indicated. Merging images together to give the appearance of one image is not acceptable. The method of normalization to total protein, or where appropriate, a loading control (e.g. cell signaling studies) should be explicitly stated in the text. Images may be subjected to analysis for manipulation prior to publication and authors may be requested to provide copies of the original data

Please note that the instructions related to Abbreviations, Abstract, Graphical abstract, Image manipulation and Keywords, still apply to all new submissions.

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

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF, EPS 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 on the Web (e.g., ScienceDirect and other sites. For further information on the preparation of electronic artwork, please see <http://www.elsevier.com/artworkinstructions>

Supplementary material

Each supplementary material file should have a short caption which will be placed at the bottom of the article, where it can assist the reader and also be used by search engines.

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

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.

Material and methods

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also 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 extensive citations and discussion of published literature.

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 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.

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

A Graphical abstract is mandatory for this journal (with the exception of Graphical Redox Review papers, where the graphical abstract is optional). It should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. 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. See <http://www.elsevier.com/graphicalabstracts> for examples.

Authors can make use of Elsevier's Illustration and Enhancement service to ensure the best presentation of their images also in accordance with all technical requirements: [Illustration Service](#).

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and 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). You can view [example Highlights](#) 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.

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.

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

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.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files. 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

Regardless of the application used, 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 the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.

TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

Please do not:

- Supply files that are optimized 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.

Figure captions

Ensure that each illustration has a caption. 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.

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.

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](#) and [Zotero](#), as well as [EndNote](#). Using the word processor 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.

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/redox-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 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: Van der Geer J, Hanraads JAJ, Lupton RA. The art of writing a scientific article. *J Sci Commun* 2010;163:519.

Reference to a book:

Strunk Jr W, White EB. *The elements of style*. 4th ed. New York: Longman; 2000.

Reference to a chapter in an edited book:

Mettam GR, Adams LB. How to prepare an electronic version of your article. In: Jones BS, Smith RZ, editors. *Introduction to the electronic age*, New York: E-Publishing Inc; 2009, p. 281304. [dataset] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, Mendeley Data, v1, 2015. <http://dx.doi.org/10.17632/xwj98nb39r.1>.

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 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.

AudioSlides

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. [More information and examples are available](#). Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

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 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 be notified and receive a link to the published version of the open access article on [ScienceDirect](#). This link is in the form of an article DOI link which can be shared via email and social networks. 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 [Webshop](#). Authors requiring printed copies of multiple articles may use Elsevier Webshop's 'Create Your Own Book' service to collate multiple articles within a single cover.

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>