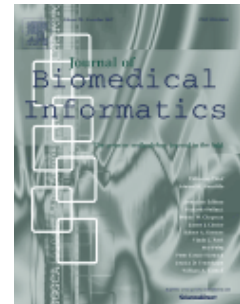




TABLE OF CONTENTS

●	Description	p.1
●	Audience	p.4
●	Impact Factor	p.4
●	Abstracting and Indexing	p.4
●	Editorial Board	p.5
●	Guide for Authors	p.6



ISSN: 1532-0464

DESCRIPTION

Aims and Scope: The *Journal of Biomedical Informatics* reflects a commitment to high-quality original research papers, reviews, and commentaries in the area of biomedical informatics. Although we publish articles motivated by applications in the biomedical sciences (for example, clinical medicine, health care, population health, and translational bioinformatics), the journal emphasizes reports of new methodologies and techniques that have general applicability and that form the basis for the evolving science of biomedical informatics. Articles on medical devices; evaluations of implemented systems (including clinical trials of information technologies); or papers that provide insight into a biological process, a specific disease, or treatment options would generally be more suitable for publication in other venues. Papers on applications of signal processing and image analysis are often more suitable for biomedical engineering journals or other informatics journals, although we do publish papers that emphasize the information management and knowledge representation/modeling issues that arise in the storage and use of biological signals and images. System descriptions are welcome if they illustrate and substantiate the underlying methodology that is the principal focus of the report and an effort is made to address the generalizability and/or range of application of that methodology.

The methods that are the focus of JBI papers may be drawn from any of a number of component sciences in the field of biomedical informatics. Although the methods are often related to the field of computer science, many JBI papers will emphasize innovative techniques from other fields, such as decision science, statistics, cognitive science, psychology, information science, organizational theory, or management science.

Papers are generally of six types:**Regular research papers:** Presentation and discussion of a biomedically or clinically motivated system or approach that has required the creation of innovative methods rather than the application of established techniques. Motivating applications may be discussed, but the new method should be discussed so that generalizability is clear, ideally with an assessment of its range of applicability. Please choose the article type "Research Paper" during the submission process. **Methodological review papers:** Reviews of a methodological approach that summarize its introduction, use, successes, and limitations. Such reviews will also often propose future research directions or critique a method and discuss the range of problems for which it may not be an appropriate solution. Note that such reviews should focus on a method or approach, not on specific application domain (e.g., avoid submitting on reviews such as "Computers in Diabetes Management"). Please choose the article type "Review article" during the submission process. **Commentaries:** These are articles, generally shorter than research papers, that tend

to discuss previously published articles or a theme that is an important area of focus for the methodological basis of biomedical informatics research and its application. Commentaries are often invited, but may be submitted by anyone after a discussion with the editors. If submission of a commentary is being considered, please submit a brief proposal to ted@shortliffe.net beforehand. Please choose the article type "Discussion" during the submission process and specify in the cover letter that your manuscript is intended as a Commentary. **Special communications:** These are articles that address an issue of broad interest to the methodologically-oriented informatics research community. They may report on the results of workshops or research studies, generally offering lessons or guidance that will be useful to others. Such papers need not report on innovative new informatics methodologies. If submission of a special communication is being considered, please submit a brief proposal to ted@shortliffe.net beforehand. Please choose the article type "Discussion" during the submission process and specify in the cover letter that your manuscript is intended as a Special Communication. **Book reviews:** The editors will occasionally identify a new book that is likely to be of interest to the JBI readership. They will invite individuals to write reviews of these volumes, and such submissions are by invitation only. Unsolicited book reviews will not be considered. Please choose the article type "Book review" during the submission process. **Editorials:** The editors or their invitees will occasionally publish editorials, but unsolicited editorials will not be considered. Please choose the article type "Editorial" during the submission process.

When an author is submitting a manuscript in response to a call for papers for a special thematic issue, the submission category should be the special issue title but the cover letter should indicate whether the article is a methodological review, a regular paper, or a commentary.

CONSIDERING SUBMITTING TO JBI? READ THIS SUMMARY TO LEARN WHAT IS APPROPRIATE FOR THE JOURNAL.

The *Journal of Biomedical Informatics* (JBI), first published by Academic Press in 1968 under the title *Computers and Biomedical Research* (CBR), was redesigned and renamed beginning with Volume 34 in 2001. Building on a strong 33-year history since CBR premiered in 1968, we made a number of changes to update and reorient the journal in light of the evolution of the field, while simultaneously seeking to fill a niche not clearly identified as a central focus by the other journals that publish papers in biomedical informatics research. We stated that goal as follows in our inaugural editorial:

"It is increasingly difficult to publish articles that will have broad appeal to a diverse readership. We have accordingly decided that it is important to introduce a tighter focus to the journal in the years ahead, and it is with this in mind that we have renamed the journal to reflect a more modern and narrow emphasis. The Journal of Biomedical Informatics (JBI) is intended to complement rather than to compete with the other major journals in biomedical informatics. In particular, we wish to emphasize papers that elucidate methodologies that generalize across biomedical domains and that help to form the scientific basis for the field. Papers will tend to be concerned with information technology rather than medical devices, and on underlying methods rather than system descriptions or summative evaluations. You should expect this journal to be an excellent source of new ideas about how to tackle difficult problems that arise in the development of computational solutions to problems in the biomedical sciences and clinical practice."

With more than 15 years of publication under the JBI title, we are pleased by the subsequent success of the journal. It has a reputation for excellence and rigor and we hope that our readers and published authors are similarly impressed by the quality of both the work and the writing that we have attracted to these pages. That quality has come at some cost. Some papers that once would have been suitable for CBR are turned away without review because they do not conform to the JBI editorial policy.

JBI seeks to publish papers that make a conceptual contribution to the field, typically by describing an innovation in methodology or technique or by discussing substantive generalizable lessons that have been learned in the context of an interesting informatics project. When a contribution has a theoretical basis, that theory is an appropriate emphasis for the exposition as well. In the figure below we illustrate our view of the relationship between the scientific base in the field and the areas of application that characterize work in biomedical informatics. In our experience, many research projects that start as applications efforts result in methodologic innovation that, properly described, contributes to the scientific base of our discipline. Thus we are not discouraging submissions that discuss interesting applications but, rather, encouraging a perspective on how best to write about and

share generalizable methodologic insights that derive from the applied work and from which others can benefit. We believe that such papers form the core of biomedical informatics as a science.

jbi_aimsscope.gif

Legend: The relationship between biomedical informatics methods, techniques, and theories and the domains of application that characterize the discipline. The Journal of Biomedical Informatics seeks papers on basic research methods and conceptual insights that are biomedically motivated but that could potentially be applied broadly in diverse domains, both within and outside biomedicine. Methods may be drawn from a large number of fields, including, but not limited to, computer science, decision science, cognitive science, information science, psychology, management science, organizational theory, and statistics.

There have been four principal reasons for returning papers without review. Perhaps the most common occurs when a paper is primarily a description of an informatics application or its evaluation. For example, a new expert system that addresses an important clinical problem, but that does not advance the methodologies underlying expert systems, would be more appropriate for another journal, either in applied informatics or in the clinical domain of application. Similarly, survey studies or analyses of user needs are likely to be suitable for JBI only if they contribute new methods for performing such studies or analyses, or new insights into user behavior, cognitive science, or human-computer interaction.

A second reason for returning papers without review occurs when a paper does not deal with the core informatics notions of information and knowledge management. Most commonly this occurs when a paper presents a new medical device or an approach to biomedical signal or image processing, especially when the emphasis is on numerical methods rather than information processing and management or knowledge-based approaches. We generally refer such papers to biomedical engineering journals or to clinical journals in the domain of application (e.g., a cardiology journal for new approaches to electrocardiogram analysis, or an imaging journal for a new mathematical approach to segmentation or other aspects of image analysis).

If you are considering your bioinformatics article for submission to JBI, please be aware of this methodological focus. Biologic discoveries based on the use of routine informatics techniques may be important biologic contributions but are not suitable for JBI. In addition, please note that JBI publishes bioinformatics papers only if they deal with issues in translational (human) science. See the [Translational Bioinformatics](#) editorial that deals with this topic before submitting your paper.

Finally, although JBI is an international journal and we understand the challenges that authors face when English is not their native language, some papers have such severe problems with their English exposition that we return them for revision, suggesting the involvement of an editor or coauthor who is expert in English before the paper can be judged suitable for entry into the scientific review process. Minor problems with language can be corrected in the editorial process, but more severe problems prevent an adequate assessment of the scientific contribution.

Of those papers that have gone to review, our eventual acceptance rate is now about 25%. Every published paper has been accepted only after significant revisions, so authors should not be surprised when revisions are required before a paper is ready for publication. We believe, however, that the rigor we have introduced in the reviewing and revision process has resulted in a better, more scientifically useful product. For example, anecdotal feedback, as well as citation and downloading data, suggest that the methodological reviews included in almost every issue have been widely used for educational and study purposes.

We have received an increasing number of submitted papers in each year since the transition from CBR to JBI. In our first year we received about 100 manuscripts but now receive well over 800 papers per year. As a result, the journal has grown in size, with more papers per issue. We also devote two or three issues per year to special methodologic topics overseen by guest editors who propose such special issues to us. Accepted papers are immediately made available online and are indexed in Medline. They appear soon thereafter in a compiled issue on ScienceDirect. Since 2016 we have stopped producing a print version of JBI, having learned that the vast preponderance of access to the journal is through the Internet and ScienceDirect. Hard copies of full issues are available from

Elsevier via the Print on Demand services. Papers are available only to subscribers for the first 12 months after publication, but then are opened up to free access in our ScienceDirect archive. Because the journal is produced online-only, there is not limit or charge regarding the use of color in figures or photographs in submitted manuscripts.

We encourage you to submit your best methodological work to JBI. Bear in mind that we provide opportunities for in-depth discussion of an innovative approach, as judged by our reviewers as well as the editors, and have avoided any arbitrary limit on the length of individual articles. We also encourage papers describing doctoral dissertation work, and emphasize that the extensive topic reviews undertaken in a thesis document often can be adapted to develop an ideal methodology review article for the JBI. JBI also has no page charges and can include multi-media components for articles in the online environment.

Biomedical informatics is a burgeoning field, with important applications and implications throughout the biomedical and clinical worlds. We are eager to have the research community consistently identify JBI as the journal that best defines the scientific base for the field. We accordingly invite both your contributions and your readership.

Edward H. Shortliffe
Editor-in-Chief

AUDIENCE

Biomedical informaticists, Health informaticists

IMPACT FACTOR

2016: 2.753 © Thomson Reuters Journal Citation Reports 2017

ABSTRACTING AND INDEXING

BIOSIS
Bioengineering Abstracts
Cancerlit
Current Contents / Clinical Medicine
MEDLINE®
EMBASE
Energy Science and Technology
INSPEC
Pascal
Physical Education Index
PubMed
Science Citation Index
Social SciSearch
Biological Abstracts
TOXFILE
BIOSIS Previews
Ei Compendex
Inside Conferences
Gale Database of Publications & Broadcast Media
Scopus
Science Citation Index Expanded
Journal Citation Reports - Science Edition
CSA Life Sciences Abstracts
EMBASE Alert
EMCARE

EDITORIAL BOARD

Editor-in-Chief:

E.H. Shortliffe, MD, Arizona State University, Phoenix, Arizona, USA

Associate Editors

R. Bellazzi, Università degli Studi di Pavia, Pavia, Italy
W. Chapman, The University of Utah, Salt Lake City, Utah, USA
J.J. Cimino, University of Alabama, Birmingham, Alabama, USA
R.A. Greenes, Arizona State University, Scottsdale, Arizona, USA
V.L. Patel, The New York Academy of Medicine, New York, New York, USA
M. Peleg, University of Haifa, Haifa, Israel
P. Tarczy-Hornoch, University of Washington, Seattle, Washington, USA
J.D. Tenenbaum, Duke University, Durham, North Carolina, USA
W.A. Yasnoff, NHII Advisors, Portland, Oregon, USA

Former Editors:

T.A. Pryor
1994-2000
H.R. Warner
1968-1993

Editorial Board:

E. Ammenwerth, Hall in Tirol, Austria
D. Aronsky, Zurich, Switzerland
E. Bernstam, Houston, Texas, USA
A. Boxwala, La Jolla, California, USA
K.B. Cohen, Aurora, Colorado, USA
G. Del Fiol, Salt Lake City, Utah, USA
J.D. Denny, Nashville, Tennessee, USA
J. Fox, Oxford, England, UK
L. Frey, Charleston, South Carolina, USA
J. Geller, Newark, New Jersey, USA
K Goodman, Coral Gables, Florida, USA
S.J.F. Jarad, Orange, Connecticut, USA
K Kahol, New Delhi, India
D. Kaufman, Scottsdale, Arizona, USA
M. Kimura, Hamamatsu, Shizuoka, Japan
H. Liu, Rochester, Minnesota, USA
V. Maojo, Madrid, Spain
F. Martin-Sanchez, Madrid, Spain
S. Miksch, Vienna, Austria
O. Ogunyemi, Los Angeles, California, USA
C.L. Overby, Baltimore, Maryland, USA
P. Payne, St. Louis, Missouri, USA
Y. Perl, Newark, New Jersey, USA
G. Purcell Jackson, Nashville, Tennessee, USA
S. Quaglini, Pavia, Italy
A. Rector, Manchester, UK
H. R. Rolka, Atlanta, Georgia, USA
A. Rzhetsky, Chicago, Illinois, USA
N. Shah, Stanford, California, USA
N. Tatonetti, New York, New York, USA
G. Tsafant, Sydney, New South Wales, Australia
A. Tucker, London, England, UK
O. Uzuner, Fairfax, Virginia, USA
C. Weng, New York, New York, USA
H. Xu, Houston, Texas, USA
R. Xu, Cleveland, Ohio, USA
M. Yetisgen, Seattle, Washington, USA
K. Yip, Hong Kong, Hong Kong
H. Yu, Amherst, Massachusetts, USA
P. Zweigenbaum, Orsay, France

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. Please note, however, that this approach to initial manuscript submission does not diminish the importance of clear writing, grammatical correctness, and careful review for typographical or spelling errors. Reviewers are still advised to comment on such problems with initial submissions and to take such problems into account in assessing the overall suitability of the paper for the journal.

To find out more, please visit the Preparation section below.

INTRODUCTION

Please read the [Aims and Scope](#) in its entirety prior to submission.

The *Journal of Biomedical Informatics* has been redesigned to reflect a commitment to high-quality original research papers and reviews in the area of biomedical informatics. Although published articles are motivated by applications in the biomedical sciences (for example, clinical medicine, health care, population health, imaging, and bioinformatics), the journal emphasizes reports of new methodologies and techniques that have general applicability and that form the basis for the evolving science of biomedical informatics. Articles on medical devices and formal evaluations of completed systems, including clinical trials of information technologies, would generally be more suitable for publication in other venues. Papers on applications of signal processing and image analysis are often more suitable for biomedical engineering journals, although we do publish papers that emphasize the information management and knowledge representation/modeling issues that arise in the storage and use of biological signals. System descriptions are welcome if they illustrate and substantiate the underlying methodology that is the principal focus of the report.

All manuscripts submitted to *Journal of Biomedical Informatics*:

- should contain original work; the original source of any previously published figures or text must be fully cited and all necessary permission to use previously published material must be obtained
- must not be currently under consideration by any other journal
- require the approval of all co-authors that the manuscript be submitted in its present form to JBI.

Please see the [Scientific Conduct editorial](#) published in the *Journal of Biomedical Informatics*.

In addition, if you are considering a submission in the field of bioinformatics, please note that JBI now publishes bioinformatics papers only if they deal with issues in translational (human) science. See the [Translational Bioinformatics](#) editorial that deals with this topic before submitting your paper.

Authors are encouraged to submit video material or animation sequences to support and enhance your scientific research. For more information please see the paragraph on video data below.

Qualifying articles in *Journal of Biomedical Informatics* are also automatically posted in PubMed Central 12 months after publication. The procedure is described in http://publicaccess.nih.gov/submit_process.htm, Method D.

Authors considering submission of a Commentary and Book reviews should first consult with the Editor-in-Chief, Edward H. Shortliffe (ted@shortliffe.net), so that guidelines and suitability can be discussed in advance of the submission.

Papers are generally of six types:

Regular research papers: Presentation and discussion of a biomedically- or clinically-motivated system or approach that has required the creation of innovative methods rather than the application of established techniques. Motivating applications may be discussed, but the new method should be discussed so that its generalizability is clear, ideally with an assessment of its range of applicability. Please choose the article type "Research paper" during the submission process.

Methodological review papers: Reviews of a methodological approach that summarize its introduction, use, successes, and limitations. Such reviews will also often propose future research directions or critique a method and discuss the range of problems for which it may not be an appropriate solution. Note that such reviews should focus on a method or approach, not on a specific application domain. Please choose the article type "Review article" during the submission process.

Commentaries: These are articles, generally shorter than research papers, that tend to discuss a previously published article or a theme or policy issue that is an important area of focus for the methodological basis of biomedical informatics research and its application. Commentaries are often invited, but may be submitted by anyone after a discussion with the editors. If submission of a commentary is being considered, please submit a brief proposal to ted@shortliffe.net beforehand. Please choose the article type "Discussion" during the submission process.

Special communications: There are articles that address an issue of broad interest to the methodologically-oriented informatics research community. They may report on the results of workshops or research studies, generally offering lessons or guidance that will be useful to others. Such papers need not report on innovative new informatics methodologies. If submission of a special communication is being considered, please submit a brief proposal to ted@shortliffe.net beforehand. Please choose the article type "Discussion" during the submission process.

Book reviews: The editors will occasionally identify a new book that is likely to be of interest to the JBI readership. They will invite individuals to write reviews of these volumes, and such submissions are by invitation only. Unsolicited book reviews will not be considered. Please choose the article type "Book review" during the submission process.

Editorials:

The editors or their invitees will occasionally publish editorials, but unsolicited editorials will not be considered. Please choose the article type "Editorial" during the submission process.

SPECIAL ISSUES IN JBI

JBI publishes special issues at the rate of 2-3 per year. We publish 6 total issues annually and the special issues are included among these regular issues (at no cost to authors or guest editors). Accordingly, we aim for special issues that are likely to attract enough high quality papers to justify creating a dedicated issue on the topic.

We look for topics that are closely aligned with the editorial policy of goals of JBI. A statement of our editorial policy ("Aims and Scope"), and our emphasis on methodological innovation and methodological reviews, rather than on applications or evaluations, is provided on the JBI home page:

<http://www.journals.elsevier.com/journal-of-biomedical-informatics/>

Note that JBI does not publish papers that are primarily related to biomedical engineering (including image or signal analysis), and any bioinformatics papers must be explicitly related to human health and/or disease (translational bioinformatics). We stress that the theme of special issues should generally be an important methodological focus rather than an application domain. Thus we would, for example, entertain special issues on "Informatics Methods for Medical Privacy" or "Evolutionary Computation in Biomedicine" (both published in 2014) but not "Informatics in Diabetes Care."

JBI does not entertain special issues that are drawn from papers originally presented at a conference or workshop, but it does publish supplements based on meeting proceedings, as outlined in the section on supplements that follows. Sometimes meetings inspire the notion for a special issue, but we do not publish papers that appeared in the proceedings of conferences (see <http://dx.doi.org/10.1016/j.jbi.2005.10.002>). The Call for Papers must make it clear that we seek open submissions to the special issue, not limited to people who may have attended or presented work at a specific meeting. If submitted papers are based on reports that were previously published in a conference proceedings, they must be substantially expanded, typically updating or providing more detail on what was previously presented at the conference. All papers must be reviewed in accordance with the usual JBI review process, with its emphasis on innovative methodology (rather than novel applications of well-known methods), and even invited papers cannot be assured of acceptance until they have met our standards for peer review.

The guest editor manages the special issue using JBI's editorial system (EES), serving as a temporary associate editor, although the Editor-in-Chief retains the final decision on the acceptance of papers and works closely with the guest editor(s) during the editorial process. When submitted papers are authored or coauthored by one of the guest editors, that paper is handled by a different associate editor, even though the paper is intended for the special issue.

If the proposed guest editor (and any co-editors) are not known to the JBI editors, or have not published in JBI previously, we also ask for a statement of qualifications, including a summary of expertise in the domain of the special issue, a summary of previous editing/reviewing/authoring experience, evidence of excellent skills in written English, and a brief CV.

The proposal for a special issue also involves the preparation of a draft Call for Papers. Examples of such 1-2 page Calls for Papers have appeared in JBI on ScienceDirect over the last several years. Potential guest editors are encouraged to refer to them for templates to follow. A proposed time line for the submission of manuscripts and the reviewing/revising process is also requested, although the time to completion of a special issue is very hard to predict given the vagaries of reviewing times, delays while papers are being revised, and the need for several rounds of reviews for some papers before they are suitable for publication.

Note also that JBI has transitioned to become an online-only journal, given the straightforward access to all content online. The journal has also moved to an article-based publishing model which has a positive effect on the satisfaction of authors who submit papers to special issues. A recent editorial describes those changes in detail (<http://www.sciencedirect.com/science/article/pii/S1532046415000179>).

Individuals who have reviewed these criteria and wish to prepare a proposal for a special issue should contact the Editor-in-Chief (ted@shortliffe.net).

SUPPLEMENTS TO JBI

Supplements to the *Journal of Biomedical Informatics* offer you the opportunity to publish research and clinical material in association with the brand name of our prestigious journal. All articles are peer-reviewed to safeguard the scientific quality of the publication and are made available to all journal subscribers, including libraries and indexing services, ensuring a high level of visibility for your material. Additionally, you may purchase print copies for your own use. If you are interested in publishing a supplement to the *Journal of Biomedical Informatics*, our terms and conditions are: A guest editor or co-editors should be identified; they will be responsible for managing the editorial process and assuring the quality of the scientific content. The manuscripts should be submitted to the journal via our editorial system: <http://ees.elsevier.com/jbi/default.asp?pg=mainpage.html> and the submitting author should select in the submission menu the supplement to which his/her manuscript belongs. Following peer review conducted by the guest editor, the editor is expected to consult with the Editor-in-Chief before a decision is made to accept a submitted article. Upon acceptance of the manuscripts, Elsevier will undertake the complete production of the supplement and make it available in ScienceDirect to all regular subscribers. If the sponsor wishes, the supplement can be made open access in perpetuity for an additional fee. Print versions of the supplement can also be produced for an additional fee. A proof copy will be sent to the guest editor for checking and final approval. JBI undertakes to publish the supplement rapidly, subject to delays in the reviewing and revision processes for individual manuscripts that may occur before a final acceptance decision. Elsevier retains the copyright for the material published in the supplement. Advertising may be included in the supplement at the publisher's normal price. Please contact Prof. Ted Shortliffe (ted@shortliffe.net), the Editor-in-Chief of the journal, to inquire regarding the suitability of your proposal. For information regarding pricing, please contact Kevin Partridge (k.partridge@elsevier.com). *Key benefits of publishing a supplement in the Journal of Biomedical Informatics:* Association with the prestigious reputation of the journal Key opinion leader endorsement of a message Rapid delivery to your target audience online, with the option to produce print copies for presentation to specific individuals or organizations Increased impact and longevity of your message Exposure to all the subscribers to the journal Inclusion of all articles in the journal's open archive 12 months after the supplement's publication. Online visibility via ScienceDirect Indexing in major databases to ensure a high level of dissemination of your published material

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 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 or as part of a published lecture or academic thesis or as an electronic preprint, see '[Multiple, redundant or concurrent publication](#)' section of our ethics policy 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 [CrossCheck](#).

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 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 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 Open Access Publication Fee. Details of [existing agreements](#) are available online.

Open access

This journal offers authors a choice in publishing their research:

Subscription

- Articles are made available to subscribers as well as developing countries and patient groups through our [universal access programs](#).
- No open access publication fee payable by authors.

Open access

- Articles are freely available to both subscribers and the wider public with permitted reuse.
- An open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For open access articles, 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 2600**, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

Green open access

Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our [green open access page](#) for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. [Find out more](#).

This journal has an embargo period of 12 months.

Elsevier Publishing Campus

The Elsevier Publishing Campus (www.publishingcampus.com) is an online platform offering free lectures, interactive training and professional advice to support you in publishing your research. The College of Skills training offers modules on how to prepare, write and structure your article and explains how editors will look at your paper when it is submitted for publication. Use these resources, and more, to ensure that your submission will be the best that you can make it.

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.

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.

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.

Additional information

If material from other copyrighted works is 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: contact Elsevier Global Rights Department, P.O. Box 800, Oxford OX5 1DX, UK; phone: (+44) 1865 843830, permissions@elsevier.com.

PREPARATION

Please note that figures and tables should be embedded in the text as close as possible to where they are initially cited. It is also mandatory to upload separate graphic and table files as these will be required if your manuscript is accepted for publication.

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. Note that the EES submission process is well supported on desktop and laptop machines using a variety of operating systems and web browsers. However, you should avoid trying to interact with EES using a tablet computer and, in particular, an IOS system. The EES environment has not been optimized for access using iPhones or iPads.

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.

Figures and tables embedded in text

Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

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

Line Spacing

All revised submissions required 1.5 line spacing

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.

LaTeX

You are recommended to use the Elsevier article class [elsarticle.cls](#) to prepare your manuscript and [BibTeX](#) to generate your bibliography.

Our [LaTeX site](#) has detailed submission instructions, templates and other information.

Article structure

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.

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.

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.

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

Authors must supply a graphical abstract for all types of articles at the time the paper is first submitted. The graphic should summarize the contents of the paper in a concise, pictorial form designed to capture the attention of a wide readership and for compilation of databases. Carefully drawn figures that serve to illustrate the theme of the paper are desired. The dimensions of the graphical abstract

are 200 x 500 pixels. Authors must supply the graphic separately as an electronic file. Please refer the following link for details of graphical abstracts and their specifications: <http://www.elsevier.com/authors/journal-authors/graphical-abstract> .

For an example of a graphical abstract please [click here](#).

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.

Math formulae

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

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors 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

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.

Color artwork

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

Figure captions

Ensure that each illustration has a caption. 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.

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.

Equations

Number equations consecutively, with the number placed in parentheses to the extreme right of the equation. Refer to equations as Eq. (3) or simply (3). Punctuate equations to conform to their place in the syntax of the sentence.

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 encouraged.

A DOI can be used to cite and link to electronic articles where an article is in-press and full citation details are not yet known, but the article is available online. 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.

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/journal-of-biomedical-informatics>

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:

Reference style

Text: Indicate references by number(s) in square brackets in line with the text. The actual authors can be referred to, but the reference number(s) must always be given.

Example: '..... as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result'

List: Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

Examples:

Reference to a journal publication:

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59.

Reference to a book:

[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://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 files in one of our recommended file formats with a preferred maximum size of 150 MB in total. Any single file should not exceed 50 MB. 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.

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. Before submitting your article, you can deposit the relevant datasets to *Mendeley Data*. Please include the DOI of the deposited dataset(s) in your main manuscript file. 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 500 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.

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](#).

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.

Interactive plots

This journal enables you to show an Interactive Plot with your article by simply submitting a data file. [Full instructions](#).

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 [Webshop](#). Corresponding authors who have published their article open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

AUTHOR INQUIRIES

Visit the [Elsevier Support Center](#) to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also [check the status of your submitted article](#) or find out [when your accepted article will be published](#).

© Copyright 2014 Elsevier | <http://www.elsevier.com>