DESCRIPTION

The *Current Opinion* journals were developed out of the recognition that it is increasingly difficult for specialists to keep up to date with the expanding volume of information published in their subject. In *Current Opinion in Biotechnology*, we help the reader by providing in a systematic manner:

1. The views of experts on current advances in biotechnology in a clear and readable form.
2. Evaluations of the most interesting papers, annotated by experts, from the great wealth of original publications.

**Division of the subject into sections**
The subject of biotechnology is divided into themed sections, each of which is reviewed once a year. The amount of space devoted to each section is related to its importance.

Analytical biotechnology • Plant biotechnology • Food biotechnology • Energy biotechnology • Environmental biotechnology • Systems biology • Nanobiotechnology • Tissue, cell and pathway engineering • Chemical biotechnology • Pharmaceutical biotechnology

**Selection of topics to be reviewed**
Section Editors, who are major authorities in the field, are appointed by the Editors of the journal. They divide their section into a number of topics, ensuring that the field is comprehensively covered and that all issues of current importance are emphasised. Section Editors commission reviews from authorities on each topic that they have selected.

**Reviews**
Authors write short review articles in which they present recent developments in their subject, emphasising the aspects that, in their opinion, are most important. In addition, they provide short annotations to the papers that they consider to be most interesting from all those published in their topic over the previous year.

**Editorial Overview**
Section Editors write a short overview at the beginning of the section to introduce the reviews and to draw the reader's attention to any particularly interesting developments. This successful format has made *Current Opinion in Biotechnology* one of the most highly regarded and highly cited review journals in the field (Impact factor = 8.035).

**Ethics in Publishing: General Statement**
The Editor(s) and Publisher of this Journal believe that there are fundamental principles underlying scholarly or professional publishing. While this may not amount to a formal 'code of conduct', these fundamental principles with respect to the authors' paper are that the paper should: i) be the authors’ own original work, which has not been previously published elsewhere, ii) reflect the authors’ own research and analysis and do so in a truthful and complete manner, iii) properly credit the meaningful contributions of co-authors and co-researchers, iv) not be submitted to more than one journal for consideration, and v) be appropriately placed in the context of prior and existing research. Of equal importance are ethical guidelines dealing with research methods and research funding, including issues dealing with informed consent, research subject privacy rights, conflicts of interest, and sources of funding. While it may not be possible to draft a 'code' that applies adequately to all instances and circumstances, we believe it useful to outline our expectations of authors and procedures that the Journal will employ in the event of questions concerning author conduct. With respect to conflicts of interest, the Publisher now requires authors to declare any conflicts of interest that relate to papers accepted for publication in this Journal. A conflict of interest may exist when an author or the author's institution has a financial or other relationship with other people or organizations that may inappropriately influence the author's work. A conflict can be actual or potential and full disclosure to the Journal is the safest course. All submissions to the Journal must include disclosure of all relationships that could be viewed as presenting a potential conflict of interest. The Journal may use such information as a basis for editorial decisions and may publish such disclosures if they are believed to be important to readers in judging the manuscript. A decision may be made by the Journal not to publish on the basis of the declared conflict.

For more information, please refer to: http://www.elsevier.com/conflictsofinterest

AUDIENCE

Biotechnologists in academia and industry who are interested in keeping abreast of advances in understanding biotechnology.

IMPACT FACTOR

2017: 8.380 © Clarivate Analytics Journal Citation Reports 2018

ABSTRACTING AND INDEXING

BIOSIS
Cambridge Scientific Abstracts
Chemical Abstracts
Elsevier BIOBASE
Current Contents/Life Sciences
EMBASE
Research Alert
MEDLINE®
Science Citation Index
Scopus
Biotechnology Citation Index
Current Biotechnology Abstracts
Index Veterinarius
Life Science Collection
Reference Update

EDITORIAL BOARD

Editorial Board
Lilia Alberghina, Università degli Studi di Milano-Bicocca, Milan, Italy
Maciek Antoniewicz, University of Delaware, Newark, Delaware, USA
Edward Bayer, Weizmann Institute of Science, Rehovot, Israel
George Guo-Qiang Chen, Tsinghua University, Beijing, China
Nam-Hai Chua, Plant Molecular Biology Lab, New York, New York, USA
Jiri Damborsky, Masaryk University, Brno, Czech Republic
Julian Davies, University of British Columbia, Vancouver, British Columbia, Canada
Victor de Lorenzo, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain
Willem de Vos, Wageningen Universiteit, Wageningen, Netherlands
Luis Angel Fernandez, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain
Alain Filloux, Imperial College London, London, UK
Matthias Heinemann, University of Groningen, Groningen, The Netherlands
Karsten Hiller, Technische Universität Braunschweig, Braunschweig, Germany
Lee Hood, Institute for Systems Biology, Seattle, Washington, USA
Karl-Erich Jaeger, Heinrich-Heine-Universität Düsseldorf, Juelich, Germany
Janet Jansson, Lawrence Berkeley National Laboratory, Berkeley, California, USA
Mattheos Koffas, Rensselaer Polytechnic Institute, Troy, New York, USA
Kazuhiro Kogure, The University of Tokyo, Nakano-Ku, Japan
Sang Yup Lee, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, The Republic of Korea
Marcial L. Lizarraga-Partida, CICESE, San Diego, California, USA
Joachim Messing, Rutgers University, Piscataway, New Jersey, USA
Beat Mollet, Nestlé Research Center, Lausanne, Switzerland
Elke Nevoigt, Jacobs University Bremen, Bremen, Germany
Robin Offord, Mintaka Foundation, Geneva, Switzerland
Sven Panke, Eidgenössische Technische Hochschule (ETH) Zürich, Basel, Switzerland
Carla Pruzzo, Università degli Studi di Genova, Genova, Italy
Juan Ramos, Estacion Experimental del Zaidin, Granada, Spain
Eugene Rosenberg, Tel Aviv University, Tel Aviv, Israel
Ian Rowland, University of Reading, Reading, UK
Athanassios Sambanis, Georgia Institute of Technology, Atlanta, Georgia, USA
Ka-Yiu San, Rice University, Houston, Texas, USA
Jacqueline Shanks, Iowa State University, Ames, Iowa, USA
Allan Shatzman, GlaxoSmithKline, King of Prussia, Pennsylvania, USA
Daniel Wang, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA
Wilfried Weber, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany
**GUIDE FOR AUTHORS**

**INTRODUCTION**
The Current Opinion journals were developed out of the recognition that it is increasingly difficult for specialists to keep up to date with the expanding volume of information published in their subject. In the Current Opinion journals, we help the reader by providing in a systematic manner: (1) The views of experts on current advances in the field in a clear and readable form. (2) Evaluations of the most interesting papers, annotated by experts, from the great wealth of original publications.

The aim of the manuscript is to review recent articles, with particular emphasis on those articles published in the past two years. In addition to describing recent trends, you are encouraged to give your subjective opinion of the topics discussed, although you should not concentrate unduly on your own research. Your review should be approximately 2000 words (not including references or reference notes), with approximately 50 references and, as such, the review is intended to be a concise view of the field as it is at the moment, rather than a comprehensive overview. Our audience ranges from student to professor, so articles must be accessible to a wide readership. Please avoid jargon, but do not oversimplify: be accurate and precise throughout. Occasionally, unpublished data can be referred to, but only when essential and should never be used to substantiate any significant point.

**Types of paper**
Submission to this journal is by invitation only. Please contact your Editorial Manager by email if you have any questions.

**BEFORE YOU BEGIN**

**Ethics in publishing**
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

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

**Submission declaration 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).

**Use of inclusive language**
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').
Authors
Please provide the names of all authors in full, including first name. No more than five authors should be listed (only those who contributed to the actual writing of the manuscript, rather than members of the laboratory contributing to primary work). Anyone else who contributed to the article can be thanked in the acknowledgements section.

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.

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

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

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

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

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

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 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.
• The Author is entitled to post the accepted manuscript in their institution's repository and make this public after an embargo period (known as green Open Access). The published journal article cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

**Gold open access**
• Articles are freely available to both subscribers and the wider public with permitted reuse.
• A gold 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 gold 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 gold open access publication fee for this journal is **USD 4150**, excluding taxes. Learn more about Elsevier's pricing policy: [https://www.elsevier.com/openaccesspricing](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 Researcher Academy**
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

**Language (usage and editing services)**
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop.

**Submission declaration**
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.
PREPARATION

Peer review
This journal operates a single blind review process. All contributions will be reviewed by the editor for suitability for the journal. The Editor's decision is final.

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

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

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
The introduction should be accessible to a wide variety of scientists by avoiding the use of jargon and concepts not familiar to non-specialists. It should outline the time period covered and the scope of the review, including the importance of and rationale behind your article. The introduction should include only a few background references.

Main text of review
Use concise, logical subheadings to provide clear links between the different sections and guide the reader through your review. Please write all abbreviations in full on first use, and use the abbreviation thereafter.

Conclusions
The conclusions section should summarise the topics discussed and describe future directions, including the author's opinions, as appropriate

Essential title page information

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

Abstract
All reviews should be prefaced by an abstract of 100-120 words. The abstract is important: it should contain sufficient information for the reader to be able to appreciate the relevance of the full article when read alone. It should include background information and specific examples of recent advances,
rather than promises that a particular subject 'will be discussed' - the scope of the review should
instead appear at the end of the introduction. References should **not** be included. Abbreviations should
be avoided as far as possible.

**Graphical abstract**
A graphical abstract is mandatory for this journal. 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. You can view Example Graphical Abstracts on our information site.
Authors can make use of Elsevier's Illustration Services to ensure the best presentation of their images
also in accordance with all technical requirements.

**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.

**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.).

Funding bodies should also be mentioned (please give full names rather than abbreviations), together
with any relevant grant numbers

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

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

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

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

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

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

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

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

**Artwork**
Figures
You are encouraged to include up to four additional elements in your review (i.e. a combination of Figures, Tables and Boxes). You should include at least one figure to summarise the main concepts discussed, and all figures should help to explain the concepts discussed in the text. All illustrations should be labelled as figures, and figures should be cited in the main text of the review in numerical order. Please note that it is the responsibility of the authors to obtain permission to reproduce copyrighted material (figures that have been published before) from the original authors and publishers.

Electronic artwork

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

A detailed guide on electronic artwork is available.

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

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

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

Color artwork
Please make sure that artwork files are in an acceptable format (TIFF or JPEG, EPS or PDF or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) in addition to color reproduction in print. Further information on the preparation of electronic artwork.

Figure captions
Ensure that each illustration has a caption. The caption should describe the figure in full, without further reference to the main text. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Supply captions separately, not attached to the figure. All abbreviations used in the figure and not in the main text should be defined at the end of the figure legend. References which appear in the figure itself should be mentioned in the figure caption as well.

Tables and boxes
Tables should be used to tabulate data discussed in further detail in the review. Boxes should be used for additional explanatory material that, although essential, interrupts the flow of the text. In addition, you can include a glossary box to describe/define terms or abbreviations used in your review. Tables and boxes should always be referred to in the main text of the article and should have an appropriate title. Please use the template in MS Word to create your tables. All such text boxes will be included in the main text word count, and must be cited in the text in numerical order.
Citation in text
The reference list should not be exhaustive - simply alert the reader to the most innovative recent papers and key reviews. Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Unpublished results and personal communications are not recommended in the reference list but may be mentioned in the text. References should be numbered consecutively in the order in which they are cited in the text, followed by those that are only cited in the figure legends or tables. Please ensure that each item in the reference list has its own number, avoiding joint references (for example, references [32a,32b] should be listed and cited as [32,33] and subsequent references numbered accordingly). Papers accepted as 'in press' may be included.

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. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes.

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/current-opinion-in-biotechnology

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

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:
Reference to a book:
Reference to a chapter in an edited book:
- Number of authors: If more than eleven authors are credited for an article, please list only the first ten, then add et al. Please DO NOT shorten the list of authors before the cut-off of ten. Journal names should be abbreviated in accordance with Index Medicus.
- Online journal references: When citing online journal references, please adhere to the convention described above, inserting the digital object identifier (DOI) after the year.
- In-text citation: When citing references in the text, please use [square brackets] rather than (parentheses) or superscript¹,² to denote the citations. Please also ensure the citations are numbered and NOT Harvard referencing style (i.e. [Moore 1965; Myrdal 1957]).
- Annotations
The majority of the references (please aim to cite approximately 50) should come from the period under review (i.e. the past two years) and, in general, at least 10% of these should be selected and annotated as being papers of special interest (●) or outstanding interest (●●). Annotated references MUST be from the past two years, and the annotation should provide a brief description of the major findings and the importance of the study. This is an essential part of each review and is very popular with our readers. For example:
Using class I tetramers, the authors demonstrate that insulin-specific CD8+ T cells account for a large proportion of infiltrated T cells in the islets of prediabetic NOD mice. This is the first study to use peptide multimers to decipher the mechanism of autoimmunity.

- Exclude from reference list

Unpublished data (including papers in preparation, papers submitted for publication and personal communications), conference abstracts, PhD theses, websites/URLs and computer programs/databases should not be mentioned in the reference list. If you feel that the citation is crucial to the review, please mention it in the text only (see below). Please keep in mind that citations should be restricted to sources freely available to most readers. (If a submitted paper is accepted for publication before we go to press, then this information can be added in an 'Update' section).

These references should be presented in the text as follows (please list the first author only, including initials and surname):

1. Personal communications: (SW Churchill et al., personal communication [or unpublished if referring to the authors' own work])
2. Submitted papers/unpublished data: (IMN Author et al., unpublished)
5. Websites: (Biological Biochemical Image Database; URL: http://bbid.grc.nia.nih.gov/)
6. Computer program/database: (Actin database, University of Harvard). (unless the program/database details have been published, in which case cite as a normal reference. For example, Nicholls A, Bharadwaj R, Honig B: GRASP: a graphical representation and analysis of surface properties. Biophys J 1993, 64:166-170.)

Note that personal communications must be authorised by those involved. You are responsible for obtaining permission to use personal communications.

**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.

**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.
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).

Submission checklist
It is hoped that this list will be useful during the final checking of an article prior to sending it to the journal’s Editor for review. Please consult this Guide for Authors for further details of any item.
Ensure that the following items are present:
One Author designated as corresponding Author:
• E-mail address
• Full postal address
• Telephone and fax numbers
All necessary files have been uploaded
• All figure captions
• All tables (including title, description, footnotes)
Further considerations
• The number of words (excluding the abstract and references does not exceed 2000
• Manuscript has been "spellchecked" and "grammar-checked"
• References are in the correct format for this journal
• All references cited in the text are mentioned in the Reference list
• References have been annotated
• Permission has been obtained for use of copyrighted material from other sources (including the Web)
For any further information please visit our customer support site at http://service.elsevier.com.

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 gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**

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

You can also check the status of your submitted article or find out when your accepted article will be published.

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