INSTRUCTIONS FOR AUTHORS

General information


Scope

*Frontiers in Biology* provides a forum for a broad range of invited and unsolicited high quality critical review papers, in English, on the latest advances in all areas of Biology in order to promote rapid communication and the exchange of ideas among biologists all around the world. *Frontiers in Biology* also publishes, from time to time, original scientific research, short communications, selected topics, timely reviews, mini-reviews, and a section devoted to correspondence and comments. The primary criterion for publication is that the articles present new insights that are of broad interest to biological scientists, biomedical scientists, and health professionals with a presentation style appropriate for a wide audience of biologists. This includes biological research in the disciplines of genetics and genomics, proteomics, neurobiology, cell and developmental biology, biochemistry and molecular biology, medical biology, microbiology, immunology, and plane sciences.

Editorial Process

To minimize publication times and ensure that important data reach readers and the public as quickly as possible, we now post accepted articles online as soon as they are made ready, prior to the print publication, at http://journal.hep.com.cn/fib. Once the proof is approved by the authors, we will post the article as a PDF. An Online-First article is not “pre-print”, but rather is considered as the full publication of that article. At the time of posting, the bibliographic information is forwarded to indexing agencies, so the article can be searched for and found on bibliographical databases and can be cited as published.

Ethical Approval of Studies and Informed Consent

For all manuscripts reporting data from studies involving human participants or animals, formal review and approval, or formal review and waiver, by an appropriate institutional review board or ethics committee is required and should be described in the “Compliance with ethics guidelines” section. For those investigators who do not have formal ethics review committees, the principles outlined in the Helsinki Declaration of 1975, as revised in 2000 (5), should be followed. For investigations of humans, state in the “Compliance with ethics guidelines” section the manner in which informed consent was obtained from the study participants (i.e., oral or written). Editors may request that authors provide documentation of the formal review and recommendation from the institutional review board or ethics committee responsible for oversight of the study.

The Journal requirements are in accordance with the uniform requirements for manuscripts submitted to biomedical
Conflicts of Interest and Financial Disclosures

A conflict of interest exists if authors or their institutions have financial or personal relationships with other people or organisations that could inappropriately influence (bias) their actions. Financial relationships are easily identifiable, but conflicts can also occur because of personal relationships, academic competition, or intellectual passion. A conflict can be actual or potential, and full disclosure to The Editor is the safest course. Failure to disclose conflicts might lead to publication of a statement or even to retraction. All submissions to *Frontiers in Biology* must include disclosure of all relationships that could be viewed as presenting a potential conflict of interest. The Editor may use such information as a basis for editorial decisions.

The corresponding author should confirm that he or she had full access to all the data in the study and had final responsibility for the decision to submit for publication. All authors are required to provide a Conflict of Interest Statement.

Manuscript submission

Authors are encouraged to submit their papers electronically via the online submission system ([https://mc.manuscriptcentral.com/fib](https://mc.manuscriptcentral.com/fib)). The web site guides authors stepwise through the creation and uploading of the various files. Manuscripts should be in a Word format. When you first submit your paper, please upload the PDF file. When your paper is accepted, you will be required to send the original source files. All correspondence, including the editor's decision and request for revisions, will be by e-mail. After reviewing process, the manuscript will be judged by one of the section editors and EIC who have the right to accept or reject a paper.

Submission requirements

Cover letter

A cover letter from the corresponding author must accompany the manuscript and should provide a brief description of what was known in the field, the conceptual breakthrough, and the significant impact of the reported findings. The authors are encouraged to suggest appropriate reviewers and are permitted to make request for up to three reviewer exclusions. Cover letter should state that the submitted material is original research, has not been previously published, and has not been submitted elsewhere while under review by *Frontiers in Biology*. The cover letter is confidential and will not be sent to the reviewers.

Manuscript components

Manuscript should be arranged in the following order:
(a) Title section (b) Abstract (c) Introduction (d) Materials and Methods (e) Results (f) Discussion (g) Acknowledgements (h) Compliance with ethics guidelines (i) References (j) Figure Legends (k) Tables (l) Figures and (m) Supplemental Materials.

Manuscripts should be prepared with Microsoft Word in double space and size 12 Times New Roman font. The following components are required for a complete manuscript: Title page (including Title, Running Title, Keywords, Authors, Author Affiliations, and Correspondence), Abstract, Keywords, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References, Legends, and displayed items including Tables and Figures, and Supplemental Materials. All Pages except for displayed items should be numbered.

For more details, please refer to examples of manuscripts ([Research article](https://example.com), [Review](https://example.com)) or contact editorial office (zhangxl@hep.com.cn).
Research article format

Title The title should be informative and concise, and not longer than 150 characters (including space). It should describe the topic of the manuscript in terms understandable to a broad readership in either a complete sentence or a phrase.

Running title The running title that describes the key meaning of the paper should be within 50 characters (including space).

Authors Authors should be listed in full names, beginning with the given name, and followed by the family name. Affiliations (including department/subunit, institution, city, state/region, postal code and country) should be provided for each author. If the authors are affiliated to different units, the affiliation sequence should be in the same order of author list, marked at the right upper corner of the author names using 1, 2, 3, etc. Corresponding author's name, full postal address, telephone and fax numbers and e-mail address need to be provided.

Abstract Each manuscript should be prefaced by an abstract of not more than 250 words and should state concisely the background, methods, results, and conclusions of the manuscript. Extensive experimental detail and reference should be avoided.

Keywords Up to 6 words separated by commas.

Introduction It mainly includes the following parts: the background of the research through literature citation, the problems or questions needed to be solved, the objectives of the research, and the main methods used.

Materials and methods Methods must be described completely enough so that other laboratories can replicate results and verify claims. Generally, standard procedures should be referenced, though significant variations should be described. Appropriate experimental design and statistical methods should be applied and described wherever necessary for proper interpretation of data and verification of claims. All novel materials and procedures should be described in sufficient detail to allow their reproduction (e.g., DNA constructs, genetic stocks, enzyme preparations, and analytical software).

Results Results can be described using text, tables and figures. The text should complement material given in Tables and/or Figures but should not directly repeat it. Please give full details of statistical analysis either in the text or in Tables and/or Figure legends. Please include the type of test, the precise data to which it was applied, the value of the relevant statistics, the sample size and/or degrees of freedom, and the probability level.

Discussion The main purpose of the Discussion is to comment on the significance of the results and set them in the context of previous work. Hypothesis should be rational and evidence-based. Please avoid repeating information in the Results section.

Acknowledgements A list of contributions, credits, potential conflicts of interests, and previous presentation of the information reported in the manuscript.

Compliance with ethics guidelines

In order to comply with the ethical requirements, the following sentences should be included in a separate section of each article just before the reference list. The section should be called “Compliance with Ethics Guidelines”.

Conflict of Interest

The Conflict of Interest statements should list each author separately by name:

John Smith declares that he has no conflict of interest.

Paula Taylor has received research grants from Drug Company A.

Mike Schultz has received a speaker honorarium from Drug Company B and owns stock in Drug Company C.

If multiple authors declare no conflict, this can be done in one sentence:

John Smith, Paula Taylor, and Mike Schultz declare that they have no conflict of interest.

Human and animal rights, and informed consent

(a) For studies with human subjects include the following:

All procedures followed were in accordance with the ethical standards of the responsible committee on human
experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study.

If any identifying information about patients is included in the article, the following sentence should also be included: Additional informed consent was obtained from all patients for which identifying information is included in this article.

(b) For studies with animals include the following sentence:
All institutional and national guidelines for the care and use of laboratory animals were followed.

(c) For articles that do not contain studies with human or animal subjects performed by any of the authors:
While it is not absolutely necessary, we recommend to include the following sentence, just to make sure that readers are aware that there are no ethical issues with human or animal subjects:
This article does not contain any studies with human or animal subjects performed by the any of the authors.

Figure legends Every figure should contain a title, and the figure legend should follow the title closely. Figure legends should provide enough information to make the figures understandable without frequently referring to the text. Do not describe methods in figure legends unless they are necessary to interpret the results conveyed by the figure. Define in the legend all symbols and abbreviations that are used in the figure.

Tables
Tables should be practically self-contained and self-explanatory. All tables should be cited in the text and numbered consecutively with Arabic numerals. Label each table at the top with an Arabic numeral followed by the table title. Insert explanatory material and footnotes below the table. Designate footnotes using lowercase superscript letters (a, b, c) reading horizontally across the table. Abbreviations that are used in a table should be defined in the footnotes. Please prepare the tables in MS Word with a single-space format. Do not embed tables as graphic files, document objects, or pictures.

Figures
Figures (graphs, charts, photographs, and illustrations) should be practically self-explanatory and labeled professionally. Dimensional drawings and diagrams should include only the essential details and as little lettering as possible. The magnification for micrograph should be indicated by scale bars, inscriptions should be legible, and the symbols and letters should be consistent among the panels. Figures should be cited in the text, and should be sequenced in the order cited. Each table/figure should occupy a single page. Please label the figure number on top left-hand of each page. We cannot accept MS Powerpoint or MS Word file for online submission.

Please make sure that the letters, labels and symbols are in proportion to the figure and are easily readable after the figures are reduced to printable size. For example, the final text should be at least 2 mm in size and the graph lines should be at least 0.5 pt in weight. We recommend that all graphs are submitted in the intended publication size. The options include:

1 column width: 3 inches (7.5 cm)
1.5-column width: 4.5 inches (11 cm)
2 column width: 6 inches (15 cm)
Maximum height: 9 inches (23.0 cm)

Figures should be prepared in a publication quality resolution. The minimal resolution is:
300 dpi for grayscale and color image
600 dpi for combination art (lettering and images)
1,200 dpi for line art

Supplemental Materials Supplemental materials that are directly related to the conclusion are welcomed. However, unrelated data may be removed by editors. Depending on the nature of supplemental data, they can be in plain text, MS
Word, MS Excel, JPEG, TIFF, video et al. We encourage authors to submit supplemental documents in PDF format if applicable.

References
The references section should include all printed/online journal articles, books and book chapters, published conference proceedings, and meeting abstracts. Please cite unpublished data (including submitted manuscripts) and personal communications in text only. Please refer to the following examples:

An article in periodical:

An article in book:

Abbreviations
Abbreviations used in the text should be defined. However, some common names, such as GTP, RNA, PBS, PCR may not be defined. All nomenclature, including gene names and symbols, should be used in a scientifically accurate manner following the nomenclature conventions adopted by the scientific community.

Open Choice
In addition to the normal publication process (whereby an article is submitted to the journal and access to that article is granted to customers who have purchased a subscription), Springer now provides an alternative publishing option: Springer Open Choice. A Springer Open Choice article receives all the benefits of a regular subscription-based article, but in addition is made available publicly through Springer’s online platform SpringerLink.

Springer Open Choice

Copyright transfer
No article can be published unless accompanied by a signed Copyright Transfer Statement, which ensures a transfer of copyright from the authors to the Higher Education Press, including print version, disk version, online version and other media versions. A copy of the Copyright Transfer Statement to be used will be provided with the letter of acceptance of the manuscript. Authors are asked to scan and return by e-mail or fax the signed statement to the editorial office of Frontiers in Biology at the Academic Publishing Division of the Higher Education Press.

No part of a paper which has been published by Frontiers in Biology may be reproduced or published elsewhere without the written permission of the publisher.

Open Choice articles do not require transfer of copyright as the copyright remains with the author. In opting for open access, the author(s) agree to publish the article under the Creative Commons Attribution License.

Research data policy
The journal encourages authors, where possible and applicable, to deposit data that support the findings of their research in a public repository. Authors and editors who do not have a preferred repository should consult Springer Nature’s list of repositories and research data policy.

- List of Repositories
- Research Data Policy

General repositories - for all types of research data - such as Figshare and Dryad may also be used. Datasets that are assigned digital object identifiers (DOIs) by a data repository may be cited in the reference list. Data citations should include the minimum information recommended by DataCite: authors, title, publisher (repository name), identifier.

- DataCite

Springer Nature provides a research data policy support service for authors and editors, which can be contacted at
Author enquiries

For submission inquiries, tracking articles and any information please contact the Frontiers in Biology Editorial Office in Higher Education Press. All correspondence for the journal should be sent to the following address. Please include the manuscript dispatch number in all correspondences.

Frontiers in Biology Editorial Office
Editor: Xueli Zhang
Academic Journal Publishing Division, Higher Education Press
Floor 15, Fusheng Building, No. 4, Huixindongjie Str., Chaoyang Dist.
Beijing 100029, China
Tel: 86-10-58556534, Fax: 86-10-58556034
E-mail: zhangxl@hep.com.cn
Frontiers in Biology
Editor-in-Chief: Song, H.
ISSN: 1674-7984 (print version)
ISSN: 1674-7992 (electronic version)
Journal no. 11515