

## Instructions for Authors

### About *Science Bulletin*

*Science Bulletin* (*Sci. Bull.*, formerly known as *Chinese Science Bulletin* from 1966 to 2014) is a multidisciplinary academic journal supervised by the Chinese Academy of Sciences (CAS) and co-sponsored by the CAS and the National Natural Science Foundation of China (NSFC). *Sci. Bull.* is a semi-monthly international journal publishing high-caliber peer-reviewed research on a broad range of natural sciences and high-tech fields on the basis of its originality, scientific significance and whether it is of general interest. In addition, we are committed to serving the scientific community with immediate, authoritative news and valuable insights into upcoming trends around the globe.

*Sci. Bull.* is indexed by Science Citation Index, Chemical Abstracts, SCOPUS, Google Scholar, Inspec, Academic Search Alumni Edition, Academic Search Complete, Academic Search Elite, Academic Search Premier, ASFA 1: Biological Sciences and Living Resources, ASFA 2: Ocean Technology, Policy and Non-Living Resources, Biological Sciences, Biological Abstracts, BIOSIS Previews, CAB Abstracts, Current Contents/Physical, Chemical and Earth Sciences, Current Mathematical Publications, Digital Mathematics Registry, EMBio, Environmental Engineering Abstracts, Environmental Sciences and Pollution Management, Mathematical Reviews, MathSciNet, Meteorological and Geostrophysical Abstracts, Pollution Abstracts, Water Resources Abstracts, Zentralblatt MATH, Zoological Record.

### Criteria for publication

The criteria for publication in *Sci. Bull.* include:

- Originality and creativity of the research
- Significant scientific importance
- Interest to broad interdisciplinary readership

### Review policy and procedures

*Sci. Bull.* adopts a rigorous peer-review procedure. All submissions are initially evaluated carefully by the scientific editors and executive editors who have a broader perspective and wider context from which to view all of the submitted manuscripts. Manuscripts that fall outside the journal's scope and those that are not deemed by the editors to be strong candidates for publication will be returned to the authors before peer-review, typically within 3–5 working days. The manuscripts passing the initial review will be assigned to associate editors, and then sent to qualified peer reviewers.

*Sci. Bull.* invites an editorial board consisting of more than 100 of the top scientists throughout the world to ensure the editorial decisions made are independent, unbiased and professional. Being a multidisciplinary scientific journal, the editorial criteria can be made uniform across disciplines.

The editors will make every effort to reach decisions on these papers within 4 weeks of the submission date. Accepted papers will be normally published online within 4 weeks of acceptance. Any major changes after acceptance are not allowed.

### Contributions types

**Reviews:** Summarize the representative recent progress in certain core scientific disciplines, comment on the research status, and highlight future directions. They should focus on one topical aspect rather than providing a comprehensive literature survey. Review papers should closely relate to, but not only focus on the author's own research work. Reviews are solicited by the editors, but unsolicited submissions may also be considered. A typical review should normally be limited to 10 pages including up to 100 references, a less than 250-word abstract, 4–6 keywords and up to 10 displayed items.

**Progress:** Introduce and comment on the substantial advancement and its importance in the fast-developing fields. Progress articles are expected to be no more than 4 pages with no more than 3 display items, 4–6 keywords and less than 40 references.

**Articles:** Originally report substantial advances regarding an important scientific problem. Articles normally include a 250-word abstract, 4–6 keywords, up to 6 figures or tables and up to 40 references. Other supporting information should usually be included in supplementary materials which will only be published online. Articles are suggested to be limited to 8 pages, including references, captions and notes.

**Letters:** Provide rapid and concise report of a novel finding that is brief in nature but is of general interest to a broad readership. Letters are expected to be no more than 3 pages with an abstract, 4–6 keywords and no subsections. Thus, the beginning paragraphs should present concise but yet sufficient background information that would allow the readers to appreciate the rationale of the work, and put the study in a proper perspective. Up to 3 displayed items and no more than 10 references are allowed for Letters. Any other supporting information (if necessary) should be submitted as supplementary materials.

**Research Highlights:** Highlight and explain potential scientific significance of a most recent exciting research. Although most of the Research Highlights published in *Sci. Bull.* are solicited, we welcome inquiries regarding your personal viewpoint on new research advances. Research Highlights should be limited to 2 pages with 1 displayed item and less than 10 references.

**News & Views:** Introduce or comment on recent scientific advances or issues that have major influence on science or scientific community. News & Views are usually solicited by *Sci. Bull.* News & Views are expected to be no more than 2 pages and 10 references.

**Comments:** Comment on a general scientific issue or policy of broad interest. Comments are expected to be limited to 1 page with less than 5 references.

**Correspondences:** Discuss and reply to the contributions published in *Sci. Bull.* Correspondence should be no more than 1 page with less than 5 references.

## Manuscript preparation

### Cover letter

Please include:

- The name, institution, phone numbers and e-mail address of corresponding author(s)
- Suggestions for at least 4 potential reviewers with detailed contact information (valid email address, name of institutions)
- Name and institutions of reviewer(s) that wish to be excluded (optional)
- Total number of words of the manuscript
- Conflict of interest statement for all authors
- Brief introduction on the significance of the research work

### General formatting requirements

- Use A4 size paper size
- 1.5-spaced text throughout
- 11-point Times New Roman font
- Number all pages, including those with figures

### Text organization

Manuscripts are suggested to be arranged in the following order:

- Title page
- Abstract
- Keywords
- Introduction
- Materials & methods (experimental procedures)
- Results
- Discussion and conclusion
- Acknowledgments
- Disclosure of potential Conflict of Interest
- References
- Figure legends
- Tables
- Artwork and illustrations
- Electronic supplementary material

#### a. Title page

- A concise and informative title
- The name(s) of the author(s). All authors are responsible for the content of the manuscript
- The affiliation(s) and address(es) of the author(s)
- The current e-mail address, telephone numbers of the corresponding author(s)

#### b. Abstract

One single paragraph of no more than 250 words that clearly describe the major findings reported in the manuscript.

#### c. Keywords

Provide a list of 4–6 words/phrases that reflect the specificity of the paper for indexing purposes in order of importance. Careful selection of keywords will help researchers to retrieve, read and cite your paper.

#### d. Introduction

Briefly introduce the purpose of the study and its relationship to earlier work in the field. Usually no more than one formatted page.

#### e. Materials and methods (experimental procedures)

Briefly but sufficiently describe the details to permit a qualified reader to repeat the experiments. Previously published procedures should be referenced without detailed description.

When reporting studies that involve human participants, authors should include a statement that the studies have been approved by the appropriate institutional and/or national research ethics committee and have been performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

The following statements should be included in the “materials and methods” or in the text before the References section:

**Ethical approval:** “All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.”

**For studies with animals,** the following statement should be included: “All applicable institutional and/or national guidelines for the care and use of animals were followed.”

#### f. Results

Concisely present experimental results in text or display items (tables or figures).

#### g. Discussion and conclusion

Should focus on the interpretation of the results and avoid repeated information that already existed in the “Introduction” and “Results” sections.

#### h. Acknowledgments

Acknowledgments of grants, funds, people, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.

#### i. Disclosure of potential Conflict of interests

Authors must disclose all relationships or interests that could influence or bias the work. Examples of potential conflicts of interests that are directly or indirectly related to the research may include but not limited to the following:

- Research grants from funding agencies (please give the research funder and the grant number)
- Honoraria for speaking at symposia
- Financial support for attending symposia
- Financial support for educational programs
- Employment or consultation
- Support from a project sponsor
- Position on advisory board or board of directors or other type of management relationships
- Multiple affiliations
- Financial relationships, for example equity ownership or investment interest
- Intellectual property rights (e.g. patents, copyrights and royalties from such rights)
- Holdings of spouse and/or children that may have financial interest in the work

In addition, interests that go beyond financial interests and compensation (non-financial interests) that may be important to readers should be disclosed. These may include but are not limited to personal relationships or competing interests directly or indirectly tied to this research, or professional interests or personal beliefs that may influence your research.

The corresponding author will include a summary statement in the text of the manuscript in a separate section before the reference list. An examples of disclosures is shown below:

**Conflict of interest:** Author A has received research grants from Company A. Author B has received a speaker honorarium from Company X and owns stock in Company Y. Author C is a member of committee Z.

If no conflict exists, the authors should state:

**Conflict of interest:** The authors declare that they have no conflict of interest.

#### j. References

An endnote template can be downloaded from <http://www.scibull.com>

##### • Citation

Reference citations in the text should be numbered consecutively in square brackets. Some examples:

- (i) Negotiation research spans many disciplines [3, 4].
- (ii) This result was later contradicted by Becker and Seligman [5].
- (iii) This effect has been widely studied [1–3, 7].

##### • Reference list

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should only be mentioned in the text. Do not use footnotes or endnotes as a substitute for a reference list.

Please always use the standard abbreviation of a journal's name according to the ISSN List of Title Word Abbreviations, see [www.issn.org/2-22661-LTWA-online.php](http://www.issn.org/2-22661-LTWA-online.php).

- Journal article  
Gamelin FX, Baquet G, Berthoin S et al (2009) Effect of high intensity intermittent training on heart rate variability in prepubescent children. *Eur J Appl Physiol* 105:731–738  
Smith J, Jones M Jr, Houghton L et al (1999) Future of health insurance. *N Engl J Med* 341:325–329
- Article by DOI  
Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. *J Mol Med*. doi:10.1007/s001090000086
- Book  
South J, Blass B (2001) *The future of modern genomics*. Blackwell, London
- Book chapter  
Brown B, Aaron M (2001) The politics of nature. In: Smith J (ed) *The rise of modern genomics*, 3rd edn. Wiley, New York, pp 230–257
- Online document  
Cartwright J (2007) Big stars have weather too. *IOP Publishing PhysicsWeb*. <http://physicsweb.org/articles/news/11/6/16/1>. Accessed 26 June 2007
- Dissertation  
Trent JW (1975) *Experimental acute renal failure*. Dissertation, University of California

#### k. Figure legends

- Each figure should have a concise caption describing accurately what the figure depicts. Include the captions in the text file of the manuscript, not in the figure file.
- Figure captions begin with the term Fig. in bold type, followed by the figure number, also in bold type.
- No punctuation is to be included after the number, nor is any punctuation to be placed at the end of the caption.
- Identify all elements found in the figure in the figure caption; and use boxes, circles, etc., as coordinate points in graphs.
- Identify previously published material by giving the original source in the form of a reference citation at the end of the figure caption.

#### l. Tables

- All tables are to be numbered using Arabic numerals.
- Tables should always be cited in text in consecutive numerical order.
- For each table, please supply a table caption (title) explaining the components of the table.
- Identify any previously published material by giving the original source in the form of a reference at the end of the table caption.
- Footnotes to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data) and included beneath the table body.

### m. Artwork and illustrations

The authors are required to submit all of your artwork – photographs, line drawings, etc. with the greatest accuracy to detail with a resolution of no less than 300 dpi is required for all artworks.

- **Figures**
    - You may initially embed the figures in the manuscript text for review. If your paper is accepted, you will need to submit the figures as high resolution TIFF or JPEG files.
    - Name your figure files with the figure number, e.g., Figure 1.
    - We encourage the use of color figures where they will enhance the presentation of the data. Note that each color page carries a 1000 RMB (US \$ 200) publication.
  - **Line art**
    - Definition: Black and white graphic with no shading.
    - Do not use faint lines and/or lettering and check that all lines and lettering within the figures are legible at final size.
    - All lines should be at least 0.1 mm (0.3 pt) wide.
    - Scanned line drawings and line drawings in bitmap format should have a minimum resolution of 1200 dpi.
  - **Halftone art**
    - Definition: Photographs, drawings, or paintings with fine shading, etc.
    - If any magnification is used in the photographs, indicate this by using scale bars within the figures themselves.
    - Halftones should have a minimum resolution of 300 dpi.
  - **Combination art**
    - Definition: a combination of halftone and line art, e.g., halftones containing line drawing, extensive lettering, color diagrams, etc.
    - Combination artwork should have a minimum resolution of 600 dpi.
  - **Color art**
    - Color art is free of charge for online publication.
    - If black and white will be shown in the print version, make sure that the main information will still be visible. Many colors are not distinguishable from one another when converted to black and white. A simple way to check this is to make a xerographic copy to see if the necessary distinctions between the different colors are still apparent.
    - If the figures will be printed in black and white, do not refer to color in the captions.
    - Color illustrations should be submitted as RGB (8 bits per channel).
  - **Figure lettering**
    - To add lettering, it is best to use Helvetica or Arial (sans serif fonts).
    - Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–12 pt).
    - Variance of type size within an illustration should be minimal, e.g., do not use 8-pt type on an axis and 20-pt type for the axis label.
    - Avoid effects such as shading, outline letters, etc.
    - Do not include titles or captions within your illustrations.
  - **Figure numbering**
    - All figures are to be numbered using Arabic numerals.
    - Figures should always be cited in text in consecutive numerical order.
    - Figure parts should be denoted by lowercase letters (a, b, c, etc.).
    - If an appendix appears in your article and it contains one or more figures, continue the consecutive numbering of the main text. Do not number the appendix figures, “A1, A2, A3, etc.” Figures in online appendices (Electronic Supplementary Material) should, however, be numbered separately.
  - **Figure placement and size**
    - When preparing your figures, size figures to fit in the column width.
    - For most journals the figures should be 39 mm, 84 mm, 129 mm, or 174 mm wide and not higher than 234 mm.
  - **Permissions**
    - If you include figures that have already been published elsewhere, you must obtain permission from the copyright owner(s) for both the print and online format. Please be aware that some publishers do not grant electronic rights for free.
- ### n. Electronic supplementary material
- Sci. Bull.* accepts electronic multimedia files (animations, movies, audio, etc.) and other supplementary files to be published online along with an article. This feature can add dimension to the author's article, as certain information cannot be printed or is more convenient in electronic form.
- **Submission**
    - Supply all supplementary material in standard file formats.
    - Please include in each file the following information: article title, journal name, author names; affiliation and e-mail address of the corresponding author.
    - To accommodate user downloads, please keep in mind that larger-sized files may require very long download times and that some users may experience other problems during downloading.
  - **Audio, video, and animations**
    - Always use MPEG-1 (.mpg) format.
  - **Text and presentations**
    - Submit your material in PDF format; .doc or .ppt files are not suitable for long-term viability.
    - A collection of figures may also be combined in a PDF file.

- **Spreadsheets**
  - Spreadsheets should be converted to PDF if no interaction with the data is intended.
  - If the readers should be encouraged to make their own calculations, spreadsheets should be submitted as .xls files (MS Excel).
- **Specialized formats**
  - Specialized format such as .pdb (chemical), .vrl (VRML), .nb (Mathematica notebook), and .tex can also be supplied.
- **Collecting multiple files**
  - It is possible to collect multiple files in a .zip or .gz file.
- **Numbering**
  - If supplying any supplementary material, the text must make specific mention of the material as a citation, similar to that of figures and tables.
  - Refer to the supplementary files as “Online”, e.g., “... as shown in the animation (Fig. S1 online)”, “... additional data are given in Table S1 (online)”.
  - Name the files consecutively, e.g. “ESM\_3.mpg”, “ESM\_4.pdf”.
- **Captions**
  - For each supplementary material, please supply a concise caption describing the content of the file.
- **Processing of supplementary files**
  - Electronic supplementary material will be published as received from the author without any conversion, editing, or reformatting.
- **Accessibility**
  - In order to give people of all abilities and disabilities access to the content of your supplementary files, please make sure that
  - The manuscript contains a descriptive caption for each supplementary material.
  - Video files do not contain anything that flashes more than three times per second (so that users prone to seizures caused by such effects are not put at risk).

## Manuscript submission

Manuscripts should be submitted via online submission at <http://mc03.manuscriptcentral.com/scibull>. If you have problems with the online submission, please contact *Sci. Bull.* editorial office by email at [csb@scichina.org](mailto:csb@scichina.org) or by phone at 86-10-64015905. Please make sure you have prepared all the required manuscript information listed as follows before starting submission.

If you are submitting a revised manuscript, please enclose a “Responses to the reviewers” to answer the reviewers and the editors’ comments, together with the revised manuscript with all the changes highlighted.

## Informed consent

All individuals have individual rights that are not to be infringed. Individual participants in studies have the right to decide what happens to the (identifiable) personal data gathered and to what they have said e.g. during a study or an interview as well as to any photograph that was taken. Hence it is important that all participants gave their informed consent in writing prior to inclusion in the study. Identifying details (names, dates of birth, identity numbers and other information) of the participants that were studied should not be published in written descriptions, photographs, and genetic profiles unless the information is essential for scientific purposes and the participant (or parent or guardian if the participant is incapable) has given written informed consent for publication. Complete anonymity is difficult to achieve in some cases, and informed consent should be obtained if there is any doubt. For example, masking the eye region in photographs of participants is inadequate protection of anonymity. If identifying characteristics are altered to protect anonymity, such as in genetic profiles, authors should provide assurance that alterations do not distort scientific meaning.

The following statement should be included:

**Informed consent:** “Informed consent was obtained from all individual participants included in the study.”

**If identifying information about participants is available in the article,** the following statement should be included:

“Additional informed consent was obtained from all individual participants for whom identifying information is included in this article.”

## Ethical responsibilities of authors

*Sci. Bull.* is committed to upholding the integrity of the scientific record. As a member of the Committee on Publication Ethics (COPE), the journal allows the COPE guidelines on how to deal with potential acts of misconduct.

Authors should refrain from misrepresenting research results which could damage the trust in the journal and ultimately the entire scientific endeavour. Maintaining integrity of the research and its presentation can be achieved by following the rules of good scientific practice, which includes:

- The manuscript has not been submitted to more than one journal for simultaneous consideration.
- The manuscript has not been published previously (partly or in full), unless the new work concerns an expansion of previous work (please provide transparency on the re-use of material to avoid the hint of text-recycling (“self-plagiarism”).
- A single study is not split up into several parts to increase the quantity of submissions and submitted to various journals or to one journal over time (e.g. “salami-publishing”).
- No data have been fabricated or manipulated (including images) to support your conclusions.
- No data, text, or theories by others are presented as if they were the authors own (“plagiarism”). Proper acknowledgements to other works must be given (this includes material that is closely copied (near verbatim), summarized and/or paraphrased), quotation marks are used for verbatim copying of material, and permissions are secured for material that is copyrighted.
- Important note: the journal may use software to screen for plagiarism.
- Consent to submit has been received from all co-authors and responsible authorities at the institute/organization where the work has been carried out before the work is submitted.
- Authors whose names appear on the submission have contributed sufficiently to the scientific work and therefore share collective responsibility and accountability for the results.

## After acceptance

### My Publication

Upon acceptance of your article you will receive a link to the special Author Query Application at Springer's web page where you can sign the Copyright Transfer Statement online and indicate whether you wish to order Open Choice, offprints, or printing of figures in color. 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. Once the Author Query Application has been completed, your article will be processed and you will receive the proofs.

### Copyright transfer

Authors will be asked to transfer copyright of the article to the Publisher (or grant the Publisher exclusive publication and dissemination rights). This will ensure the widest possible protection and dissemination of information under copyright laws.

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.

### Language

Manuscripts that are accepted for publication will be checked by our copyeditors for spelling and format style. This may not be sufficient if English is not your native language and substantial editing would be required. In that case, you may want to ask a native speaker to help you or arrange for your manuscript to be checked by a professional language editor prior to submission. A clear and concise language will help editors and reviewers concentrate on the scientific content of your paper and thus smooth the peer review process.

Use of an editing service is neither a requirement nor a guarantee of acceptance for publication.

### Proof reading

The purpose of the proof is to check for typesetting or conversion errors and the completeness and accuracy of the text, tables and figures. Substantial changes in content, e.g., new results, corrected values, title and authorship, are not allowed without the approval of the Editor.

After online publication, further changes can only be made in the form of an Erratum, which will be hyperlinked to the article.

### Page charges and offprints

Page charges are 300 RMB (US \$50) for each page in black and white and 1000 RMB (US \$200) for each color page. An invoice will be sent to the corresponding author by the Editorial Office. If offprints and sample journals are required, please contact the managing editor and pay extra fee. The full text article opens free to the readers inside China at <http://www.scibull.com:8080/EN/volumn/home.shtml>, and the full text in English is available to overseas readers at <http://link.springer.com/journal/11434>

### Online first

The article will be published online after receipt of the corrected proofs. This is the official first publication citable with the DOI. After release of the printed version, the paper can also be cited by issue and page numbers.

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