BioTechniques Author Guidelines

This document outlines how to prepare articles for submission. We recommend you read these guidelines in full before submitting your article or making an article proposal.

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Journal aims & scope

*BioTechniques* is a peer-reviewed, open-access journal dedicated to publishing original laboratory methods, related technical and software tools, and methods-oriented review articles that are of broad interest to professional life scientists, as well as to scientists from other disciplines (e.g., chemistry, physics, computer science, plant and agricultural science and climate science) interested in life science applications for their technologies.

Since 1983, *BioTechniques* has been a leading peer-reviewed journal for methods-related research. The journal considers:

- Reports describing innovative new methods, platforms and software, substantive modifications to existing methods, or innovative applications of existing methods, techniques & tools to new models or scientific questions
- Descriptions of technical tools that facilitate the design or performance of experiments or data analysis, such as software and simple laboratory devices
- Surveys of technical approaches related to broad fields of research
- Reviews discussing advancements in techniques and methods related to broad fields of research
- Letters to the Editor and Expert Opinions highlighting interesting observations or cautionary tales concerning experimental design, methodology or analysis

Audience

The audience for *BioTechniques* consists of research scientists working at the laboratory bench. The journal is as a valuable reference for all those whose research interests involve laboratory work in the life sciences.
## At-a-glance article formatting checklist

<table>
<thead>
<tr>
<th>Sections</th>
<th>Word limit (excluding abstract and references)</th>
<th>Abstract</th>
<th>Method Summary</th>
<th>Graphical Abstract</th>
<th>Author Contributions</th>
<th>Key words</th>
<th>Article subheadings</th>
<th>Future Perspective &amp; Executive Summary</th>
<th>Reference limit</th>
<th>Figures and tables permitted (Combined limit of eight in total – additional will be made supplementary)</th>
<th>Supporting cover letter</th>
<th>Protocol*</th>
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<tr>
<td>Review/Practical Guide</td>
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<td>20</td>
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</tbody>
</table>

*Authors are encouraged to create their protocols on protocols.io, and cite them in the submission. This supports reproducibility and access to research.
Search engine optimization

Why are search engines important?
One of the most common ways for readers to find an article is using a search engine, such as Google, Google Scholar or Bing. Therefore it is important to write your article with a few points in mind, to help interested readers find your work.

How can I help my article be discovered?
Include key phrases that represent your research in the abstract. Think about what you might search for when looking for articles yourself, and include this.
Make sure the most important/relevant key phrase is also in the article title whilst ensuring the content has a natural flow.
Choose appropriate keywords that reflect the content of your work – where different words are commonly used to describe the same thing (i.e., a full term and an abbreviation), include both.
Aim to be as concise as possible in the abstract (within the journals’ word limit of 120 words or fewer).
Article types

*BioTechniques* publishes a range of article types, descriptions of which are outlined below. Authors are encouraged to consult the ‘at-a-glance formatting checklist’ for details on word counts and other formatting requirements.

The information below gives an overview of the requirements for each article type published by *BioTechniques*. However, authors should consult the ICMJE “Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals” ([http://www.icmje.org/recommendations/](http://www.icmje.org/recommendations/)), in particular the section on “Preparing a Manuscript for Submission to a Medical Journal” prior to submitting to *BioTechniques*, for more detailed information.

**Benchmarks, Reports and Letters to the Editor**

Authors of these peer-reviewed article types must provide a supporting cover letter on submission briefly detailing:

- Relevance to the journal’s audience;
- Where the novelty in the study lies;
- Direct and potential implications of the findings.

Authors are also advised to consult the Methods Reporting Checklist for Authors, available [here](http://www.future-science.com).

**Experimental details and data:**

Only where a novel experimental procedure has been employed full details must be provided, such that a skilled scientist would be able to reproduce the results presented. Details of routine or previously reported experimental procedures should be provided via references only. Experimental procedures and/or data running to more than two Word document pages should be placed in a supplementary information file.

*BioTechniques* encourages authors to submit their data to an open repository, allowing readers to form a complete picture of the manuscript, and to utilize the data in future research endeavours. Where authors are able to do this, please provide details on how to find this information in the main body of the manuscript and at the end of the abstract.

Authors should include ethical information in the methods section of their research articles.

1. **Benchmark**

Benchmarks are peer-reviewed short communications describing new methods or brief but substantive modifications of existing methods. Authors must demonstrate either significantly improved results compared to standard protocols or equivalent results with substantial time or cost savings. Benchmarks should contain a short 3–4 sentence Abstract (120 words). In addition, a 1–3 sentence Method Summary (focusing only on the method itself and not supporting data) is also required at submission. The Introduction, Results & Discussion section should be combined in Benchmark articles. Authors are encouraged to provide brief enumerated protocols using the *BioTechniques* template found in these guidelines or other appropriate supplementary materials when necessary.

**Required sections:** (for a more detailed description of these sections see [Article sections](http://www.future-science.com)):
2. Report

Reports describe new techniques, materials, and protocols useful in biological and biochemical research laboratories. Manuscripts should present well-rounded studies reporting either innovative methodological advances or novel modifications to existing methods that are of substantive value to the field. Reports should contain four sections: (i) Abstract, (ii) Introduction, (iii) Materials and Methods, and (iv) Results and Discussion. A 1–3 sentence Method Summary (focusing on only the method itself and not supporting data) is required at submission.

Required sections: (for a more detailed description of these sections see Article sections):

- Title (maximum 120 characters)
- Running head (maximum 50 characters)
- Author(s) names, contributions & affiliations
- Abstract (maximum 120 words)
- Method Summary
- Keywords (3–10)
- Introduction
  - Should only cite directly pertinent references
  - Should not include data or conclusions from the work being reported
- Materials & methods/Experimental
  - Where an organization was paid or otherwise contracted to help conduct the research (e.g., data collection and management), this should be detailed
  - Should include information indicating that the research was approved or exempted from the need for review by the responsible review committee (institutional or national). Where no formal ethics committee is available, a statement indicating that the research was conducted according to the principles of the Declaration of Helsinki should be included
  - Information on the selection and description of participants should define how authors measured race or ethnicity and justify their relevance
- Results & Discussion
  - Numeric results should be given not only as derivatives (e.g. percentages) but also as the absolute numbers from which the derivatives were calculated
  - Statistical significance of results should be specified, if any
  - Authors should avoid claiming priority or alluding to work that has not been completed
- Conclusions
3. Letter to the Editor
Letters to the Editor highlight interesting observations or cautionary tales concerning experimental design, methodology or analysis. Authors should present their observations with supporting data and recommend potential solutions to the problems raised.

Required sections: (for a more detailed description of these sections see Article sections):
- Title (maximum 120 characters)
- Running head (maximum 50 characters)
- Author(s) names, contributions & affiliations
- Keywords (3–10)
- Main body with no subheadings
- References
- Reference annotations
- Financial disclosure/Acknowledgements
- Ethical conduct of research
- Other pertinent information such as data sharing

For authors presenting information regarding clinical trials, the guidelines recommended by CONSORT (http://www.consort-statement.org/) and GPP3 (http://www.ismpp.org/gpp3) should be followed. In addition, where available the clinical trial registration number should be included at the end of the abstract, and on the first mention of the trial in the main body of text. Unregistered clinical trials should be declared as such, and the reason for nonregistration should be provided. Mention of other trials should also include the relevant registration number, where available.

Secondary outcomes, exploratory analyses, and post hoc analyses should be clearly identified as such; these may be included in the primary publication or published separately, in which case they should clearly reference the primary publication and should not be published before it.

Observational studies: where observational research has been carried out, authors should follow the recommendations of STROBE (http://www.strobe-statement.org/).

Reviews & Practical Guides
These are surveys of technical approaches related to broad fields of research. Authors should present a balanced perspective on the subject, avoid overemphasis of their own work, and attempt to acknowledge all significant contributions to the field. While Reviews and Practical Guides are generally solicited by the editors, prospective authors are welcome to submit proposals. For additional information on the scope and format of Reviews and Practical Guides, please contact the editors directly.

Systematic Reviews:
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Systematic reviews should be conducted following the recommendations of PRISMA (http://www.prisma-statement.org/).

**Required sections:** (for a more detailed description of these sections see [Article sections](#)):
- Title (maximum 120 characters)
- Running head (maximum 50 characters)
- Author(s) names, contributions & affiliations
- Abstract (maximum 120 words)
- Keywords (3–10)
- Introduction
- Main body with subheadings
- Conclusions
- Future perspective
- Executive Summary
- References
- Reference annotations
- Financial disclosure/Acknowledgements
- Ethical conduct of research

**White Paper**
White Papers are authoritative reports that bring together the opinions and current thinking of leading stakeholders or recognized experts. They may offer recommendations, outline proposals and aim to set out current ‘consensuses’ related to an issue. The issue under discussion should be of immediate importance to the advancement of the field. White Papers will be accepted at the discretion of the Editor.

**Word limit:** 4000–8000 words (excluding abstract, keywords and references).

**Required sections:** (for a more detailed description of these sections see [Article sections](#)):
- Title (maximum 120 characters)
- Running head (maximum 50 characters)
- Author(s) names & affiliations
- Abstract (maximum 120 words)
- Keywords (3-10)
- Body of article
- References: limit of 50 references
- Acknowledgements: author acknowledgements, plus, where relevant, details of individuals who contributed to the article, but who did not fulfill the criteria to be listed as authors
- Disclosures: to include funding information, financial and/or conflict-of-interest disclosures, disclosure of any writing assistance (and the funding source for this), and any other relevant information
- There is a combined limit of 4 figures and tables. Any additional tables and figures must be submitted as supplementary information, which will be available online only.

**Interviews**
Interviews are conducted with key opinion leaders in the field, and can include a look back over their career and achievements to date, a discussion on their current research, and their thoughts and observations on the field as a whole. Individuals are invited to take part in an Interview, either verbal or written, at the Editor’s discretion, and the contents of the interview undergo internal review. The
opinions expressed in an Interview are those of the Interviewee, and do not necessarily reflect the views of Future Science.

**Expert Opinions**

Expert Opinion articles are short articles that provide an insight into, or a snapshot of issues of topical importance to the journal’s target audience or researchers and other professionals. The intention is that the article should offer an expert perspective on a topic of recent interest.

*Required sections:* (for a more detailed description of these sections see [Article sections](#):

- Title
- Author(s) names, contributions & affiliations
- Keywords
- Main body with subheadings if preferred
- References
- Reference annotations
- Financial disclosure/Acknowledgements
- Ethical conduct of research

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**Article sections**

The following list provides notes on the key article sections; authors should consult the ‘at-a-glance formatting checklist’ to determine which sections are required for their submission.

**Title**

Concisely and clearly conveys the scope/novelty of the article; not more than 120 characters. Should not include abbreviations if possible, and should avoid redundant language such as “A study of...”.

**Running head**

Abbreviated title to appear in the header of the article PDF pages; not more than 50 characters.

**Author(s) names & affiliations**

Including full name, postal address, phone and fax numbers, and e-mail address. Note: we can only list one corresponding author. Where available, authors should also add their ORCID iD during the manuscript submission process. For more information on ORCID, see below.

*Guidance on author sequence:*

Author sequence is at the authors’ discretion; however, Future Science journals suggest following the recommendations in GPP3 Appendix Table 2 ([https://www.ismpp.org/gpp3](https://www.ismpp.org/gpp3)), whereby authors are listed either in order of the level of their contribution, or alphabetically. The corresponding author should always be indicated.

*Guidance on a change of affiliation during writing:*

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Where an author has changed their affiliation prior to the publication of an article, the affiliation should reflect where the major part of the work was completed. Current affiliation and contact information should be listed in an acknowledgement.

**Authorship criteria:**
*BioTechniques* follows the [recommendations of the ICMJE](https://www.icmje.org) as regards authorship – authorship should be based on the following 4 criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Contributors who do not fulfill all four criteria should be listed in the acknowledgements section.

**Group authorship:**
When a group name is included as an author (i.e., the XYZ Study Group), the respective group member names should be listed in the acknowledgements section. In relevant Medline/PubMed-indexed journals, these individuals are acknowledged as contributors to the article. The submitting author/agent should therefore ensure that group member names are included in full, are spelled correctly, and appear in the order they wish them to be listed on Medline/PubMed. More guidance from Medline can be found here: [https://www.nlm.nih.gov/bsd/policy/authorship.html](https://www.nlm.nih.gov/bsd/policy/authorship.html).

**Changes to authorship:**
Should a change to authorship be required either before or after article publication, this should be brought to the attention of the Journal Editor. This will then be investigated, and corrections made if deemed appropriate by the Editor and with the agreement of all authors involved.

**Author Contributions**
Please list the contributions to the manuscript made by each author.

**Abstract**
Not more than 120 words; no references should be cited in the abstract. The abstract should highlight the importance of the field under discussion within the journal’s scope, and clearly define the parameters of the article.

For clinical trials, the guidelines recommended by CONSORT should be followed when writing the abstract ([http://www.consort-statement.org/](http://www.consort-statement.org/)), and the clinical trial registration number included at the end of the abstract, where available.

Data deposition: where data have been deposited in a public repository, authors should state at the end of the abstract the data set name, repository name and number.

**Method Summary**
Where required, please include a 1–3 sentence description of the method introduced in the manuscript. This should be concise and clearly detail the methodological novelty of the research. Please do not discuss experimental results or the advantages of the methods.

**Keywords**
A selection of 5-10 words that encapsulate the scope of the article.
Body of the article
The article content should be arranged under relevant headings and subheadings to assist the reader.

Future Perspective
A speculative viewpoint on how the article will impact the field, what further research is needed, etc.

Executive Summary
Bulleted summary points that illustrate the main conclusions made throughout the article. Where appropriate, relevant headings that correspond to those in the manuscript should be inserted.

Accession Numbers
All appropriate datasets, images, and information should be deposited in public resources. Please provide the relevant accession numbers (and version numbers, if appropriate) after first use of the entity and at the end of the abstract (see “abstract” section above). Please also provide accession numbers of all entities such as genes, proteins, mutants, diseases, etc. for which there is an entry in a public database.

Acknowledgements
Author acknowledgements, plus, where relevant, details of individuals who contributed to the article, such as study group members, or those who contributed but who did not fulfill the criteria to be listed as authors.

Disclosures
See further information below.

Other pertinent information
Where relevant, authors should provide information regarding data availability, links to protocols on protocols.io, and information regarding materials sharing, cell line authentication, RRIDs and so on. See the Editorial Policies section for further information.

ORCID member organization
Future Science Group is pleased to be a Member Organization of ORCID, the Open Researcher and Contributor ID, underlining our commitment to transparency and discoverability for our authors: https://www.future-science-group.com/orcid

What is ORCID?
ORCID provides researchers with a unique identifier – an ORCID iD – plus a mechanism for linking their research outputs and activities to their ORCID iD.

An ORCID iD is a unique and persistent digital identifier that ensures your work is correctly associated with you, regardless of whether your name is similar to (or the same as!) another individual, or if your name changes.

ORCID is integrated into many systems used by publishers, funders, institutions and other research-related services.

Why register?
Your ORCID iD:

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Future Science Ltd is part of the Future Science Group www.future-science-group.com
Distinguishes you and ensures your research outputs and activities are correctly attributed to you
Reliably and easily connects you with your contributions and affiliations
Reduces form-filling: you enter data once, have it reused often
Improves recognition and discoverability for you and your research outputs
Is interoperable: it works with many institutions, funders, and publishers
Is persistent: you can use it throughout your research career

Watch “Why ORCID?” to learn more: https://vimeo.com/237730655

Connect your ORCID iD to Future Science Group
Future Science Group’s submission system, ScholarOne, supports ORCID, giving you the option to include an ORCID iD when you submit a manuscript to us.

If you already have an ORCID iD, simply associate this when creating your account on ScholarOne. Alternatively, if you have yet to register for an ORCID iD, click the appropriate link to create one:

By providing an ORCID iD during the submission process, it can then be incorporated by the journal into your accepted article’s metadata, ensuring your work is appropriately attributed to you and that your ORCID record is updated accordingly.

Your ORCID iD will also be published within the article so that readers can link to your public ORCID profile, and from there to your other work.

Learn more about ORCID at https://orcid.org/help
Disclosures
The following provides further information on financial, COI, ethical and data sharing disclosures that should be included in all relevant publications.

Financial & competing interests disclosure
Disclosing any information about the interests of the author(s) that could influence how readers receive and understand the work. This includes information related to:

- **The work under consideration for publication** – detailing any resources received directly or indirectly (via your institution) to enable the completion of the work (with a timeframe from the initial conception of the work, to the present) – such as grants. This includes funding for any writing assistance that has been used in the creation of the manuscript, which should be stated along with the sources of funding for such assistance.
- **Relevant financial activities outside the submitted work** – disclosing interactions (i.e., personal, academic or financial relationships) with any entity that could be considered broadly relevant to the work, that could be perceived to influence, or that gives the appearance of potentially influencing, the submitted work. Authors should disclose any such interactions that have occurred for a period of 36 months prior to the submission.
- **Intellectual property**
- **Any other relationships not covered above** that could be perceived by readers to have influenced, or give the appearance of potentially influencing, the work.

For further detail, authors should refer to the Future Medicine Author Disclosure Form (available here), which should also be completed and submitted alongside their manuscript submission.

These requirements are based on the ICMJE Conflict of Interest policies (http://www.icmje.org/conflicts-of-interest/).

**Example financial & competing interests disclosure:**
“This work was supported by a grant from FUNDING BODY (grant no.: XYZ12345). AUTHOR 1 has received consultancy fees from COMPANY A and COMPANY B. AUTHOR 2 has received speaker fees from COMPANY C, has been an advisory board member for COMPANY D, and owns stock in COMPANY E. Author 3 holds a patent for XXX (patent number: XXX). The authors have no other relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript apart from those disclosed.

Medical writing and editorial support were provided by WRITER of MEDICAL COMMUNICATIONS COMPANY, and were funded by COMPANY A.”
**Ethical conduct of research**
For studies involving data relating to human or animal experimental investigations, authors should obtain appropriate institutional review board approval and state this within the article (for those investigators who do not have formal ethics review committees, the principles outlined in the Declaration of Helsinki should be followed, and this should be stated accordingly).

In addition, for investigations involving human subjects, authors should obtain informed consent from the participants involved and include an explanation of how this was obtained in the manuscript.

**Example ethical disclosure:**
“The authors state that they have obtained institutional review board approval from INSTITUTION for the research described. In addition, they have obtained verbal and written informed consent from the patients for the inclusion of their medical and treatment history within this work.”
Data sharing statement
For studies reporting the original results of a clinical trial or the secondary analysis of clinical trial data, authors should include a data sharing statement, as described on the ICMJE website:

Authors are asked to specify whether their manuscript reports either the original results of a clinical trial, or the secondary analysis of clinical trial data that have been shared with them.

Original results of a clinical trial
For the reporting of original results, authors will be asked to complete the following table (found in the Author Disclosure Form), which will form the basis of the data sharing statement:

| Will individual, de-identified participant data be available (including data dictionaries)? |  |
| What data in particular will be shared? |  |
| What other documents will be available, if any (e.g., study protocol, statistical analysis plan, etc.)? |  |
| When will data be available (start and end dates)? |  |
| By what access criteria will data be shared? To include: |  |
| - With whom? |  |
| - For what types of analyses? |  |
| - By what mechanism? |  |

Examples:
“The authors certify that this manuscript reports original clinical trial data. The data will not be made publicly available.”

“The authors certify that this manuscript reports original clinical trial data. Individual, de-identified participant data that underlie the results reported in this article (text, tables, figures, and appendices) are available from the corresponding author following publication, including the clinical study report and study protocol.”

“The authors certify that this manuscript reports original clinical trial data. Data reported in this manuscript are available within the article or posted publicly at www.clinicaltrials.gov, according to the required timelines. Additional data from the study (e.g., study protocol) are available upon reasonable request.”

Secondary analysis of shared clinical trial data
For the reporting of secondary analyses of clinical trial data that have been shared with the authors, a statement to this effect must be included, including the source of the data.

Example:
“The authors certify that this manuscript reports the secondary analysis of clinical trial data that have been shared with them, and that the use of this shared data is in accordance with the terms (if any) agreed upon their receipt. The source of this data is: *****.”
References

Key points

Authors should focus on recent papers and papers older than 5 years should not be included except for an over-riding purpose.

Primary literature references, and any patents or websites, should be numerically listed in the reference section in the order that they occur in the text (including any references that only appear in figures/tables/boxes).

Information from manuscripts submitted but not accepted should be cited in the text as “unpublished observations” with written permission from the source.

Avoid citing a “personal communication” unless it provides essential information not available from a public source, in which case the name of the person and date of communication should be cited in the text, with written permission from the source.

References should be denoted numerically and in sequence in the text, using Arabic numerals placed in square brackets, i.e., [12].

Reference annotations: 6–8 references should be highlighted that are of particular significance to the subject under review as “* of interest” or “** of considerable interest”, along with a brief (1–2 line) synopsis.

The Future Science EndNote style can be downloaded from our website at: https://www.future-science.com/authorguide

Format

Author’s names should appear without full stops in their initials

List up to six authors’ names. If there are more than six authors, then quote the first three only followed by et al.

A full stop follows authors’ names

Article title given in full

Journal name should be in italics and abbreviated to standard format

Volume number, with the issue number in brackets (if available), followed by comma, not bold

Page number range separated by a hyphen with no spaces, followed by the year in brackets, and then a full stop

Reference annotations

Papers or of particular interest should be identified using one or two asterisk symbols:

* = of interest

** = of considerable interest

Each of the chosen references should be annotated with a brief sentence explaining why the reference is considered to be of interest/particular interest.

Making the most of your article
We encourage authors to enhance their article with digital assets, such as graphical abstracts and infographics, to help readers discover and learn about their research. More information is available here.

With in-house graphics and video teams, we are able to offer a range services to assist you in the preparation of all digital enhancements. If you are interested in including any digital enhancements with your article, please discuss with the Journal Editor.

**Graphical abstracts**

*BioTechniques* encourages the use of graphical abstracts, a concise, visual summary of the main findings of the article, helping readers to quickly understand the findings of the paper and its relevance to them.

Graphical abstracts will be made freely accessible to all readers and feature prominently on the article webpage alongside the main abstract. They will also be used by the journal Editors to promote articles to audiences via social media.

Graphical abstracts will be peer-reviewed alongside the article and should be submitted with the first draft. However this does not need to be the final version – we are happy to accept a rough sketch or equivalent that will resemble the final version. The final version can then be created whilst the draft is being reviewed and finalized based on the reviewers’ feedback.

**Infographics**

Infographics go beyond the graphical abstract and provide a more in-depth, at-a-glance overview of the information presented in the article. An example is available at [https://www.futuremedicine.com/doi/10.2217/fon-2017-0646](https://www.futuremedicine.com/doi/10.2217/fon-2017-0646). Infographics will appear at the end of the article PDF and online alongside the article. These will also be used by the Editor when sharing details of the article via social media (for more information on our social media activities please see the [Post-publication tools](https://www.futuremedicine.com/doi/10.2217/fon-2017-0646) section).

**Video abstracts**

Video abstracts give you the opportunity to introduce readers to your work in your own words. Various formats are accepted, including the author discussing their work on camera or providing audio commentary that is complemented with a series of slides/images. Video abstracts should be short and to the point – no more than 2–3 mins in total. The aim is to create something that will draw-in potentially interested readers – so it’s important to keep the language clear, and include any key words or phrases associated with the work.

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