INFORMATION FOR AUTHORS

Aims and Scope

The Journal of Biological Methods (JBM) (ISSN 2326-9901) is a multidisciplinary and open-access journal committed to publishing peer-reviewed papers on cutting-edge and innovative biological techniques, methods and protocols. Manuscripts submitted for consideration are expected to describe original research on novel biotechnology, biological methods and experimental techniques, significant optimization and modification of existing methods, development of step-by-step protocols based on established methods and technologies, and reviews on technical aspects of a particular biological field. JBM covers all biological sciences including, but not limited to, the following areas:

Biochemistry
Bioinformatics
Biomedical science
Biophysics
Biotechnology
Cancer biology
Cell biology
Chemical biology
Clinical sciences
Epigenetics
Genetics and genomics
Immunology
Medical science
Microbiology
Model organism
Molecular biology
Nanotechnology
Neuroscience
Physiology
Plant biology
Signal transduction
Stem cells
Zoology

Article Types

JBM publishes the following types of articles:

Articles. Articles are full length and peer-reviewed reports presenting original research on novel biological methods and techniques or significant modifications to existing protocols. An article has the following major sections: abstract, introduction, materials and methods, results, discussion and references.

Protocols. Protocols are step-by-step guide and instructions to a new technique or a commonly used technique with significant modification for improvement. Protocols can also cover existing techniques for which prior protocols have not been published. To be considered for publication in JBM, Protocols need to bring a significant added value to their respective biological or biomedical fields. Protocols presenting very succinct procedures, minor variations/additions to previously published protocols or a combination of previously documented procedures that do not represent a substantial innovation or bring obvious benefits will generally not be considered. Protocols are peer-reviewed and contain the following major sections: abstract, background, materials, procedure, anticipated results, troubleshooting and references.

Resources. Resources present information on innovative and useful online tools, services and databases that hold broad appeal for the community at large.

Benchmarks. Benchmarks present studies designed to objectively compare two or more methods with original data and discuss their pros and cons.

Reviews. Reviews are peer-reviewed articles that aim to provide a timely, comprehensive and insightful overview of a particular technique or techniques for the study of a particular aspect of biology.

Commentaries. Commentaries have a flexible format, mainly to provide a personal perspective on a published manuscript or a topic of scientific importance. They should be of interest to a broader readership and be written in layman's terms. The length is typically 1-2 printed pages. Commentaries are usually commissioned by the journal. Authors who wish to submit an unsolicited commentary should contact the editorial office.

Application Notes. Application notes are product specific technical guides which are of general interest to readers of the Journal. This type of articles is considered as advertisements and will not be submitted to PubMed or PubMed Central indexing services.

Editorial Process

JBM is committed to providing authors with fast, constructive and fair reviews. At submission, authors are encouraged to suggest editorial members and referees who have the expertise needed to judge the paper. Submitted papers will be first evaluated by the Editors-in-Chief or Associate Editors to determine whether they should be reviewed by external referees based on scientific merit and technical quality of the papers. Submissions determined not to be reviewed by editors will be returned to authors and will in general not be considered again unless substantial revision has been made. Resubmitted papers will be considered as new submission. For peer-reviewed papers, a decision of either acceptance, acceptance after revision, reconsideration after revision, or rejection will be made by editors based on the evaluation of referees. We aim to offer a fast publication schedule while maintaining rigorous peer review. Decision will usually be reached within 3 weeks of submission.

Publication Schedule

Individual articles will be published as soon as they are ready and will be added to the "current" volume's Table of Contents.

Editorial Policies

Manuscripts are considered with the understanding that the (i) it is not under consideration by another publication or any electronic medium; (ii) no part of the work has been published previously in print or electronic format. Any manuscript that contains any data that have been submitted for publication elsewhere will not be considered under any circumstance.

Authorship

The corresponding author is responsible for ensuring that all appropriate contributors are listed as authors and that all authors have agreed to the manuscript's content and its submission to JBM. In a case where we become aware of an authorship dispute, authorship must be approved in writing by all of the parties.

Competing Interests

JBM requires all authors to disclose any financial and personal con-

flict of interest that might influence the results or interpretation of their manuscript. Authors must declare any such conflict during submission process and in the Acknowledgments section of the manuscript. The corresponding author will be asked to sign on behalf of all the authors a Conflict of Interest declaration form upon acceptance of their paper. Any affiliation associated with a payment or financial benefit exceeding $10,000, or 5% ownership of a company, or research funding by a company with related interests would constitute a conflict and must be declared.

Studies Involving Human Subjects and Animals

For manuscripts reporting studies involving human subjects, statements identifying the committee approving the studies and confirming that informed consent was obtained from all subjects must appear in the appropriate section. All experiments on live vertebrates or higher invertebrates must be performed in accordance with relevant institutional and national guidelines and regulations. In the manuscript, a statement identifying the committee approving the experiments and confirming that all experiments conform to the relevant regulatory standards must be included.

Copyright Policy

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2. Authors are able to enter into separate, additional contractual arrangements for the non-exclusive distribution of the journal's published version of the work (*e.g.*, post it to an institutional repository or publish it in a book), with an acknowledgement of its initial publication in this journal.

3. Authors are permitted and encouraged to post their work online (*e.g.*, in institutional repositories or on their website) prior to and during the submission process, as it can lead to productive exchanges, as well as earlier and greater citation of published work (See The Effect of Open Access at http://opcit.eprints.org/oacitation-biblio.html).

Archive in PubMed Central

To comply with the policies of funding agencies, such as the NIH in the USA, the Wellcome Trust and the Research Councils in the UK, and the Deutsche Forschungsgemeinschaft in Germany, upon publication, JBM will deposit articles in PubMed Central.

Manuscript Preparation

General Guidelines for Formatting Manuscripts

Manuscripts must be written in clear and concise English and be in accordance with the following length and formatting guidelines. The Editors reserve the right to return manuscripts that are not in accordance with the guidelines.

Text

The Editorial Office currently only accepts text files in MS Word format. Please submit the full text (including figures and their accompanying legends, tables, and references) as a single MS Word file. The **text should be typed in 12-point Times New Roman font, and should be single-spaced throughout**.

Manuscripts should be presented in the following order: (i) Title page, (ii) Abstract and Key words, (iii) Main text, (iv) Acknowledgments, (v) References, (vi) Figure and Figure legends, (vii) Tables (with title and footnotes if any). Footnotes to the text are not allowed and such materials should be incorporated into the text. For the convenience of the reviewers, **figures should be embedded in MS Word file and their legends should appear immediately below their corresponding figures**.

Title page

Title page should contain (i) the title of the paper. Title should be short, informative and contain major key words of the manuscript. Abbreviations should be avoided in the title. ii) the full names of the authors, (iii) authors' affiliations. (iv) full postal and email address of corresponding author(s), (v) a short running title (less than 40 characters), (vi) abbreviations used.

Abstract and Keywords

Abstract should be a single paragraph not exceeding 250 words. Abbreviations should be avoided where possible. Reference citations within the abstract are not permitted. The abstract should describe all key novel findings of the study (Research Articles) or key concept and steps (Protocols). Up to five keywords should be given in alphabetical order, below the abstract, each separated by a comma.

Graphical abstract

For accepted papers in the section of "Articles" "Protocols", "Resources" and "Benchmarks", a graphical abstract summarizing the method or protocol of the article in a concise and pictorial form should be provided. The image must clearly represent the work described in the article and should be submitted upon acceptance of the article. The image should be 600 (w) × 400 (h) pixels in size and have a resolution of no more than 150 pixels/inch (ppi) or dpi. Lettering in the image should use Arial font with a size of 12–16 points. Preferred file type is JPEG.

Figures

Figures and supplementary figures should be presented in the order they are mentioned in the text. All figures should be cited in consecutive order in consecutive Arabic numerals in the text (*e.g.*, **Figure 1**, **Figure 2** and **3**, **Figure 3A** and **B**, **Figure 2A-C**). When figures are cited in parenthesis, figures name should be shortened as Fig. (*e.g.*, **Fig. 1**).

The final dimensions of figures will be between 82 mm and 172 mm wide on the printed page. Figures divided into panels should be labeled with an upper-case, bold letter (Helvetica or Arial Font, such as **A**, **B**, **C**). Multi-panel figures should be composed as one single image and be in proportion, with consistently sized lettering so that the whole figure can be proportionally scaled down to the smallest size possible at which the essential details are visible.

For initial submission, apart from embedded in MS Word file (see "Text" above), figures should also be submitted as separate TIFF files with a resolution of at least 300 dpi.

Figure legends

Figure legends should start with a caption for each figure followed by a brief description of the methods for conducting the experiments and the data presented in the figure. When a figure contains multiple

panels, each panel should be mentioned as **A**., **B**., **C**., etc.

Tables

Tables should be typed on separate pages and numbered consecutively with Arabic numerals (**Table 1**, **Table 2**, etc.). Tables should be self-explanatory and include a brief descriptive title. Footnotes to tables indicated by lower-case superscript letters are acceptable, but extensive experimental details should be avoided. Tables should be cited in the text as **Table 1**, **Table 1-3**, etc.

Mathematics and Equations

Mathematical characters and equations should be prepared using MS Word's Equation Editor or MathType version 6.0 or higher (available from Design Science, Inc.).

Movies

Movies are accepted to accompany manuscripts of Protocol and Article types. Two types of movies can be created by the authors:

(i) a movie that provides a visual demonstration of the whole method or protocol described in the main text. Such movie should not be more than 1 GB in size and must contain a title page showing the title of the manuscript, authors and their affiliations and a voice-over narration. The movie will be presented online and playable in a browser without the need of downloading the video file.

(ii) supplementary movies that are short video clips (no more than 20 MB in size) and serve as supplementary data.

Both types of movies should be cited in the main text as **Movie S1**, **Movie S2** and etc. Movies can be submitted as Flash Movie (.swf), Audio Video Interleave (.avi), Quicktime (.mov), Windows Media (.wmv), and animated GIF (gif). A brief legend for each movie should be included at the end of the main manuscript file.

References

Only articles that have been published or that are accepted for publication at a named publication should be cited in the reference list. The Vancouver system (also known as "author-number" system) of referencing should be used. References should be numbered consecutively in order of appearance in the text in square brackets. If cited in tables or figure legends, number according to the first identification of the table or figure in the text. Reference to unpublished data and personal communications should not appear in the list but should be cited in the text only (*e.g.*, Smith A, 2000, unpublished data). Names of journals should be abbreviated in the style used in PubMed. Authors are responsible for the accuracy of the references.

The number of cited references should not exceed the limit specified for each type of manuscripts (see section specific guidelines).

Authors are not required to provide doi or Pubmed ID numbers for cited references.

If EndNote program is used for formatting references, please use the PLoS-Public Library of Science Style which can be downloaded from this link from the EndNote web site: http://endnote.com/styles/PLoS.ens

Examples of reference listing:
Journal articles
1. Ting AH, Schuebel KE, Herman JG, Baylin SB (2005) Short double-stranded RNA induces transcriptional gene silencing in human cancer cells in the absence of DNA methylation. Nat Genet 37: 906-910.
2. Yip KY, Cheng C, Bhardwaj N, Brown JB, Leng J, et al. (2012) Classification of human genomic regions based on

experimentally determined binding sites of more than 100 transcription-related factors. Genome Biol 13: R48.
Books
1. Bates B (1992) Bargaining for life: A social history of tuberculosis. Philadelphia: University of Pennsylvania Press. 435 p.
Book Chapters
1. Hansen B (1991) New York City epidemics and history for the public. In: Harden VA, Risse GB, editors. AIDS and the historian. Bethesda: National Institutes of Health. pp. 21-28.
Websites
Website citations should be formatted to include the following components: name of the web page or entire site, the organization creating or owning the site, date of the site is cited, and the URL to the page or site. For example:
1. MethPrimer. Li Lab, Department of Urology, University of California San Francisco. Cited on May 30, 2012. Available from: http://www.urogene.org/mp.

Supplementary Information

Supplementary information is peer-reviewed material directly relevant to the conclusions of an article that cannot be included in the printed version owing to space or format constraints. Supplementary information should enhance, but not be essential to, a reader's understanding of the paper and may consist of additional text, materials, figures, tables and movies.

Supplementary information should be combined into a single PDF file except for large Excel tables (see below) and movies (see above). This PDF file should be labeled "Supplementary Information" and should start with a title page containing the title of the paper, authors, a table of content that provides a clear and easy access to the sections of supplementary information, as cited in the main text.

All supplementary figures and supplementary tables should be cited as "Figure S1", "Table S1", "File S2", etc., throughout the text. Each figure legend should be typed beneath its figure.

Large supplementary tables (more than 50 rows) can be submitted as MS Excel spreadsheet documents (.xls or .xlsx).

A list of supplementary data with a brief legend for each piece of data (*e.g.*, supplementary materials, figures, tables, movies, etc.) should be included at the end of the main manuscript.

File sizes must be as small as possible. In general, a supplementary information file should not exceed 20 MB.

Supplementary information is not copy-edited, so authors should ensure that it is supplied ready for publication. It cannot be modified, nor new supplementary information added, after the paper has been accepted for publication.

Section Specific Guidelines

Research Articles

Research articles are full length (max. 5000 words, up to 6 display items including figures and tables) and peer-reviewed reports presenting original research on novel biological methods and techniques or significant modifications to existing protocols. An article has the following major sections: Abstract, Introduction, Materials and Methods, Results, Discussion and References (max.30 references).

Protocols

Protocols are step-by-step guide and instructions to a new technique or a commonly used technique with significant modification for improvement (max. 4000 words, up to 4 displaying items). Protocols can also cover existing techniques for which prior protocols have not

been published. Protocols are peer-reviewed and contain the following major sections: Abstract, Background, Materials, Procedure, Anticipated Results, Troubleshooting and References (maximum of 20 references).

Protocols should be formatted to include the following sections (where applicable):

BACKGROUNDOUND: Background serves as an introduction to the protocol with brief history for the development of the protocol, the theory and principle behind the methodology and applications of the protocol. Figures depicting protocol principle, diagram or flowchart are encouraged.

MATERIALS: Materials section should in general include the following three components.

- **Reagents**: List all reagents used in the protocol with the vendor name, vendor location and preferably a catalog number.
- **Recipes**: List the recipes of solutions used in the protocol. Purchased ready-to-use solutions and recipes do not need to be listed.
- **Equipment**: List major equipment used with the accompanying vendor name, vendor location and preferably a catalog number.

PROCEDURE: Procedure can be divided into major sections with a heading for each section (such as cell culture, chromatin cross linking, chromatin isolation, etc.) and each step numbered below. Numbers should be contiguous throughout the procedure. For example, the first heading may include steps 1-4 and the second heading steps 5-7.

Under each step or section, the following headings may be included where needed:

- **TIPS/HINTS**: Provide any tips or hints that will be helpful for readers to follow the protocol.
- **CAUTION**: Draw attention to any steps where mistakes or problems can occur.
- **NOTES:** Anything else the readers should be aware of.
- **CRITICAL STEP**: Draw attention to important steps.

ANTICIPATED RESULTS: Describe yield and other outcome that can be regularly achieved by following the protocol. Examples of typical results in the forms of figures, images or tables can be presented.

TROUBLESHOOTING: List commonly encountered problems, caveats and solutions if known for any step of the protocol. Trouble-shooting should preferably be listed in a table with the following 4 columns: (1) Step # (referring to the step in protocol), (2) Problems (describing potential problems), (3) Causes (causes of the problems) and (4) Suggestions (measures to prevent and correct the problem).

RESOURCES

Resources are full length (max. 3000 words, up to 4 display items including figures and tables) and peer-reviewed reports presenting information on innovative and useful online tools, services and databases that hold broad appeal for the community at large.

Resources reporting online tools/services should include the following sections: Abstract, Highlight/Feature, Introduction, Implementation, Troubleshooting or Debugging, Discussion and References (maximum of 20 references).

Resources reporting databases should include the following major sections: Abstract, Introduction, Data generation, Utility and Discussion, and References (max. 20 references).

BENCHMARKS

Benchmarks are full length (max. 4000 words, up to 4 display items including figures and tables) and peer-reviewed reports presenting studies designed to objectively compare two or more methods with original data and discuss their pros and cons. A benchmark article has the following major sections: Abstract, Introduction, Materials and Methods, Results, Discussion and References (max. 30 references).

Reviews

Reviews are peer-reviewed articles that aim to provide a timely, comprehensive and insightful overview of a emerging or mature technique or techniques for the study of a particular aspect of biology. The main text should be about 5,000 words. References should be limited to 50.

COMMENTARIES

Commentaries have a flexible format and typically occupy 1-2 printed pages (no more than 1000 words).

Application Notes

Application Notes are generally 2000 words, excluding abstract and references, and can include up to 3 display items. Application notes can be submitted as a word document. The content of the Application Notes should focus on technical performance and evaluation of a new product or technology.

Similar to other article types, Application Notes should include the following sections: title and author contact information, abstract, main text, display Items (Figures and tables) and references (max.15 references).

HOW TO SUBMIT

Initial Submission We use an online manuscript submission and tracking system: http://www.JBMethods.org. To submit a paper to JBM, you must have registered for an account

Submission Preparation Checklist As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

1. The submission has not been previously published, nor is it under consideration by another journal (or an explanation has been provided in Comments to the Editor).
2. The submission file is in Microsoft Word format for main text.
3. The text should be typed in 12-point Times New Roman font, and **single-spaced** throughout.
4. Figures should be embedded in the main text file and also submitted as separate image files in TIFF format with a resolution no less than 300 dpi.
5. The text adheres to the stylistic and bibliographic requirements outlined in this file.
6. All supplementary information should be submitted as a single file in PDF format, except for certain special format files such as movies, Excel files containing big data, etc.
7. A cover letter should be prepared and submitted.
8. The name, institution and Email of 5 suggested reviewers should also be provided in the cover letter.

We will acknowledge receipt of a submitted manuscript by Email as soon as the quality check (appropriate manuscript format and image quality) has been completed. All further correspondence will also be by e-mail. Please contact us if you do not receive an acknowledgment Email within a few days of submission.

Manuscript Status You can check the status of your manuscript at any time in the review process by accessing the system with your password or link sent to you in the acknowledgment e-mail.

Submission of Revisions When a manuscript is returned to authors for revision, the revised version should be submitted within three months of the authors' receipt of the referee reports, unless another date is specified in the decision letter. Please contact the editor by the deadline in cases where extra time is required for revision. Additional time may be granted upon request at the Editors' discretion.

Revisions should be submitted by following the same guidelines for initial submission and be accompanied by a point-by-point response to the referees' comments as well as the editorial decision letter, in PDF or MS Word format.

Cover Image Suggestions During submission, authors are welcome to submit images as supplementary information for consideration by the editors as cover images. At initial submission, the images can be at low resolution (72 dpi). If an image is chosen for the cover, you will be asked to supply a high-resolution file of the image (300 dpi at final size).