

BioTechniques Instructions for Authors

Revised: 4/9/2003

Submit online: <http://bt.edmgr.com>.

MISSION and SCOPE

BioTechniques is a peer-reviewed journal dedicated to the publication of original laboratory methods, related technical tools, and methods-oriented review articles that are of broad interest to professional life scientists. Since 1983, *BioTechniques* has been the leading peer-reviewed journal for methods-related research. All manuscripts submitted to *BioTechniques* are first evaluated on the basis of appropriateness, originality, scientific quality, contribution to the field, and style. Suitable manuscripts (Benchmarks, Short Technical Reports, Research Reports, Reviews, BioFeatures and Product Application Focus Articles) are then subject to fair and timely peer-review according to the same rigorous standards. *BioTechniques* is dedicated to broad dissemination of its content and enlists advertiser support to provide a print version free of charge to domestic scientists and a freely available online version. The journal maintains its longstanding commitment to accept manuscripts on the basis of scientific merit alone.

Reports describing innovative new methods, substantive modifications of existing methods and innovative applications of existing methods to new models or scientific questions are appropriate subjects for the journal. Descriptions of technical tools which facilitate the design or performance of experiments or data analysis, such as software and simple laboratory devices, are welcome. Review articles dealing with techniques and related issues are generally solicited by the editors but prospective authors are welcome to submit synopses.

CATEGORIES OF ARTICLES

BENCHMARKS (maximum of 2 journal pages, approx. 1500 words, including 1-2 small figures and about 15 references) are brief communications that may include helpful hints, shortcuts, substantive modifications of existing methods or other concise new methods. Such manuscripts should not contain abstracts or subsections, but may include very brief enumerated protocols. A short summary of the report should be submitted for use in the review process.

SHORT TECHNICAL REPORTS (maximum of 3 journal pages, approx. 2500 words, including 3 small figures and about 25 references) are more focused and less

comprehensive in scope than full research reports. The format of a Research Report should be followed to the extent that seems reasonable for the subject matter.

RESEARCH REPORTS (maximum of 6 journal pages, approx. 5000 words, including 5 small figures and about 40 references) describe new techniques, materials and protocols useful in the biological and biochemical research laboratory. These manuscripts should present well-rounded studies that report innovative methodological advances of substantive value to the field. The required format is that of the standard scientific manuscript, consisting of a Title, Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgments, References, Tables and/or Figures.

REVIEWS (maximum of 8 journal pages, approx. 6500 words, including 6 small figures and about 50 references) are surveys of broad fields or focused areas of research that represent a balanced perspective on the subject. Authors should avoid overemphasis on their own work and attempt to acknowledge all who have made significant contributions to the field.

BIOFEATURES (maximum of 8 journal pages, approx. 6500 words, including 6 small figures and about 50 references) focus on special timely topics. Manuscripts of a more general and conceptual nature are welcomed.

PRODUCT APPLICATION FOCUS (maximum of 4 journal pages, approx. 3500 words, which would include 3 figures and about 25 references) is a forum for manufacturers or developers of new commercial products to describe the innovative use or application of a product. Reports should contain minimal overlap with material describing the properties, use, or application of the product available in print or online product literature. Manuscripts submitted in the Product Application Focus category are subject to the same rigorous standards of peer review as manuscripts submitted in other categories. Although such manuscripts are accepted on the basis of their scientific integrity, publication dates may be determined by factors other than the date of acceptance. When selecting manuscripts for publication, preference will be given to those that contain no proprietary information.

BIOFEEDBACK (max. 500 words) includes letters to the editor and brief communications concerning previously published papers, including errors, corrections and additions.

SPECIAL SECTIONS AND FEATURES

The following sections and features appear regularly. Authors should indicate which special section(s), if any, their manuscript might be appropriate for.

- Drug Discovery and Genomic Technologies

- Microarray Technologies
- BioComputing/BioInformatics
- Proteomic Technologies
- Molecular Diagnostic Techniques
- BioImaging

MANUSCRIPT SUBMISSION

All submissions must include the following items (described in greater detail in Submission Items below):

COVER LETTER

ABSTRACT*

MANUSCRIPT With the exception of Benchmarks and Reviews, manuscripts should include the following sections in the order shown below:

- **Title Page**
- **Introduction**
- **Materials and Methods**
- **Results**
- **Discussion**
- **Acknowledgements**
- **References**
- **Legends for Tables and Figures**
- **Tables**
- **Figures**

COPYRIGHT TRANSFER FORMS

SUPPLEMENTARY MATERIAL (e.g., reprints, related manuscripts under review or in press, etc.) when appropriate

SOFTWARE (copies for editor and reviewer use) when appropriate

* Abstracts submitted with Benchmarks are for review purposes only and do not appear in the published article.

Text items should be submitted in a format that can be opened in Word

Graphics items should be submitted as TIFF images (300 dpi or better with the exception of line drawings, which should be 1200 dpi or better.)

SUBMISSION ITEMS

COVER LETTER The cover letter (addressed to the Editor-in-Chief) should include a brief explanation of the novelty, timeliness and importance of the report. Authors should indicate the category of manuscript and which (if any) of the special sections/features for which they would like the manuscript to be considered. The letter should provide the names, affiliations, addresses, e-mail addresses, telephone numbers and FAX numbers of three or more individuals recommended to serve as independent reviewers. The individuals should have expertise on the topic of the report and should have no known conflict of interest. Authors may also specify individuals whom they wish to exclude from the review process and the reason for the exclusion. Funding sources and potential conflicts of interest should be revealed.

ABSTRACT The abstract should be a single paragraph (less than 200 words) with background information limited to one or two introductory sentences followed by a concise summary of the report. It should be written for the general readership, self-explanatory, and suitable for use by abstracting services. Abbreviations, jargon and literature citations should be avoided.

MANUSCRIPT

TITLE PAGE The title page should include the full title, full names(s) of the author(s) with the official names of authors' affiliation(s), and the name and full address (including e-mail) of the author to whom readers should direct requests for reprints and other inquiries about the article. This individual need not be the same person with whom the Editor communicates prior to publication. Carefully selected key words (3-8) should be provided for indexing purposes.

TITLE The title should be informative, explicit and concise (less than 100 characters and shorter for Benchmark articles). Avoid ambiguous terminology or overused trivial adjectives (e.g., novel, quick, efficient, inexpensive or their synonyms). The use of numerical values, abbreviations, acronyms and trademarked or copyrighted product names is discouraged in titles.

INTRODUCTION The introduction should summarize briefly the background of the method and state clearly the nature, significance and novelty of the reported technique in the context of existing methodology. Authors should conduct literature searches for antecedent papers and patents, using citations from primary sources whenever possible. Because procedures described in *BioTechniques* frequently serve as templates for adaptation to alternate model systems or scientific questions, the general applicability of the technique should be addressed here. Results should not be reported or summarized in the Introduction.

MATERIALS AND METHODS This section is especially important in a techniques-oriented publication. It should contain detailed experimental protocols for new

procedures, but previously published methods should be cited rather than described. Authors should specify the sources of any special materials, such as reagents, cell lines, expression vectors and software. Trade names of commercial products should be checked for accuracy and designated with TM or ® if they are trademarked or registered. Vendors or manufacturers of materials should be specified with their addresses (city, state or province, and country) in parentheses. Information about the identity, specificity, purity and reliability of materials and methods should be provided in this section. Authors are encouraged to use comprehensive enumerated, tabular protocols in the present tense whenever appropriate. Information in protocols should not be repeated elsewhere in the text.

RESULTS This section should include experiments and data that validate new methods and support conclusions drawn in the following Discussion section. Results may be presented in tables and/or figures. Interpretations, speculation and other discussion should not be included in the Results section, although in some cases a combined Results and Discussion section may facilitate a more concise and focused presentation.

DISCUSSION Arguments, discussion and conclusions are appropriate in this section. Discussion of the background for the work, accompanied by appropriate citations, should be confined to the Introduction.

ACKNOWLEDGEMENTS Acknowledgements to individuals and to funding sources are appropriate in this section.

REFERENCES Only articles and patents which have been published and archived should be included in the literature citations. Papers that have been accepted but not yet published can be designated as “in press.” Authors should conduct literature searches for antecedent papers and patents, using citations from primary sources whenever possible. Non-archival poster or oral presentations, and papers that have not yet been submitted or accepted, may not be cited. URLs, when included as sources, should be cited in the text only. Product literature may be cited only if no other suitable references are available. Unpublished observations and personal communications should be in the text only. Written permission for personal communications must be provided. Footnotes are not to be used. Accepted journal abbreviations can be found in the PubMed Journals Database on the NCBI web site (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=journals>). References should be typed double-spaced and should list all authors, with complete article titles, date of publication, standard abbreviated journal titles, volume and inclusive page numbers. They are to be enumerated in order of appearance in the text, by first author, and referenced by number in the text. The reference format should follow that of journals published by the American Society of Microbiology. Reference formats should conform to the following examples:

(Periodical)

1. **Lai, E., B.W. Birren, S.M. Clark, M.I. Simon and L. Hood.** 1989. Pulsed field gel electrophoresis. *BioTechniques* 7:34-42.

(Book)

1. **Ellingboe, J. and U.B. Gyllensten.** 1992. *The PCR Technique: DNA Sequencing.* Eaton Publishing, Natick, MA.

(Chapter in Book)

1. **Todd, R., J.S. Gutkind, E.J. Shillitoe, and D. Wong.** 2002. Solid tumors: microarray analysis of oral cancers, p. 139-153. In J.A. Warrington, R. Todd, and D. Wong (Eds.), *Microarrays and Cancer Research.* Eaton Publishing, Westborough, MA.

TABLES: Tables should include a title and a brief legend, if appropriate. They should be typed double-spaced on separate pages and numbered consecutively. It is preferred that tables be prepared using the Table feature in Microsoft Word or with Microsoft Excel.

FIGURE LEGENDS: Figures should be specified in numerical order within the text. The legends should be typed double-spaced on separate pages from the figures. The figure legend should be a concise and complete description of what appears in the figure, using abbreviated style and avoiding redundancy with the details reported under Materials and Methods, or elsewhere in the manuscript. The first sentence of the figure legend should function as a stand-alone title to the figure. If figures have been published previously, written permission for reproduction must be obtained from the author and publisher, and full credit must be given in the figure legend. Only standard symbols should be used and these should be in a key incorporated within the figure or defined in the figure legend. Arabic figure numbers should be included in the legend, rather than in the figure, whereas uppercase letters indicating multiple parts of figures should be incorporated into the figures.

FIGURES: Figures should be submitted as individual TIFF images, 300 dpi or better.

MANUSCRIPT PREPARATION

The manuscript should be succinct, well organized and clearly written. Standard terms and abbreviations should be used. Jargon should be avoided. For general information on style and nomenclature, authors should consult the latest edition of *Scientific Style and Format: The CBE Manual for Authors, Editors and Publishers*, published by the Council of Science Editors, Inc. (www.councilscienceeditors.org).

Typing should be double-spaced. Do not use text justification or word hyphenation. All pages should be numbered, starting with the title page.

COLOR ILLUSTRATIONS: Authors are asked to pay minimal charges for publication of color figures at the time of acceptance. The charges are \$150 for each color figure that will be less than one-half page in size, and \$250 for each color figure that will be one-half page or larger when published. Exact charges will be quoted when the Editor's decision is sent to the corresponding author. Whenever possible, figures showing data from instrument printouts should be composed of only carefully selected relevant information.

ABBREVIATIONS, NOMENCLATURE, AND UNITS OF MEASUREMENT: All abbreviations, symbols and acronyms should be defined and/or spelled out the first time that they appear in the text, unless they are so well known and standardized that no ambiguity is possible. An abbreviation may then be used throughout the remainder of the article. The recommendations of the International Union of Pure and Applied Chemistry (IUPAC) and the International Union of Biochemistry and Molecular Biology (IUBMB) Joint Combined Commission on Biochemical Nomenclature (JCBN) should be followed when naming chemical or biochemical substances. A listing of published sources that contain rules and recommendations for chemical and biochemical nomenclature can be found on the IUPAC Web site (www.chem.qmw.ac.uk/iupac). In the case of polypeptide hormones, either the IUPAC-IUBMB nomenclature or that accepted by the Endocrine Society (see Instructions to Authors in the journal *Endocrinology*) may be used. Abbreviations listed in the latest edition of the CBE Style Manual may be used without explanation in the text. Merriam Webster's Collegiate Dictionary, Tenth Edition (1993) should be used as a reference for spelling, compounding and word separation. Foreign words that are not generally used in the English language should be italicized. Latin plurals should not be used if there is an accepted English plural equivalent. SI units of measurement should be used, with a few generally accepted exceptions. Information about SI units can be found at the NIST Web site (<http://physics.nist.gov/cuu/index.html>.)

PROCESS OF SUBMISSION, REVIEW, ACCEPTANCE AND PUBLICATION

Receipt of manuscripts is acknowledged by e-mail.

Manuscripts are given an initial review by the Editor-in-Chief. If manuscripts are clearly inappropriate, lacking in originality, of poor quality, deficient in the use of the English language or of limited interest to the readership, they are rejected at this stage. Other manuscripts are ranked according to priorities determined by the Editors, and many are returned without further review even if they are of high quality.

Qualified independent referees review manuscripts anonymously and confidentially. Manuscripts are evaluated for originality, scientific quality, style and contribution to the field.

The editorial office will attempt to return reviewers' comments and the Editor's decision within four weeks of manuscript receipt. If a request for revision is made, authors should comply with the recommendations made by the editor and reviewers, and provide responses and/or rebuttals. Manuscripts should be revised and resubmitted within three months; manuscripts not revised within this time period will be considered "withdrawn" by the Editor and a letter of notification will be sent to the corresponding author. A cover letter, which explicitly addresses each point made by the editor and reviewers, should accompany any revised manuscript. All revisions, and their location in the manuscript, should be noted in the cover letter.

Authors of rejected manuscripts may appeal the editor's decision if the authors believe the decision was based on errors on the part of the editor or reviewers. Rebuttals should be sent to the attention of the Editor-in-Chief. All rebuttals will be addressed within six weeks of receipt of a letter of rebuttal. If the Editor agrees to reconsider a rejected manuscript, the author may be sent additional editorial recommendations that were not stated at the time of rejection.

When an article is accepted, the Editor will assign a tentative date of publication. The Editors will attempt to publish articles within six months of receipt and three months of acceptance. The actual publication date is determined close to the time of printing and may be earlier or later than the date given upon acceptance. Submission and acceptance dates are published with all Benchmarks, Short Technical Reports and Research Reports.

Page proofs are sent to the designated corresponding author. This is the only opportunity for authors to make corrections. Limited changes are allowed at this point. All manuscripts are copyedited and authors must confirm the validity of the copyediting to correct errors that may have been incorporated at this stage. To the extent possible, correction of page proofs is to be handled electronically or by FAX.

Reprints may be ordered using a form that accompanies the page proofs. Color reprints are quoted on an individual basis. Authors wishing to order color reprints may consider ordering extra copies of the printed journal as a less expensive alternative; such requests must be made in advance of receipt of the page proofs.

AUTHORSHIP

It is the responsibility of the corresponding author to insure that all authors have read the manuscript and approved of its submission. All authors should have had significant roles in the reported work and all persons who contributed substantively should be included as authors. Prior reports that underlie the current work must be acknowledged by appropriate citations. Unpublished work by third parties that was used in the project must also be cited, and letters of permission from third parties must be included with the manuscript submission.

CONDITIONS OF SUBMISSION

A manuscript is submitted with the implicit understanding that neither it nor the essence of its content has been published in whole or in part, including distribution on the Internet, and that it is not being considered for publication elsewhere. Authors agree to honor reasonable requests from interested scientists for provision of special materials described in the reported studies. It is the policy of this journal that newly reported sequence and structural data be deposited with the appropriate organization; however, limited data that are presented only for demonstration of the technical feasibility of the method need not be submitted to such archives. Hazards of materials or procedures used in the report must be disclosed if they are not self-evident.

CONDITIONS OF ACCEPTANCE

A manuscript is accepted with the understanding that all authors will sign an affirmation of originality statement and either a copyright release or a statement of exemption because of government employment. In certain cases, an agent of the author's employer may sign on behalf of the authors. All manuscripts are considered confidential and are not to be made available to the press or public prior to publication without permission from the Editor; however, authors may present their work at public meetings.

COVER ART

The journal welcomes submission of images to be considered for use on the cover of *BioTechniques*. Cover candidates should be images of high scientific quality and aesthetic appeal, accompanied by a caption of 50 words or less. Covers do not have to be associated with a manuscript, although some preference will be given to those that are. Images should be submitted as TIFF images, 300 dpi or better.

All images used on the cover of *BioTechniques* are entered in the annual cover photo contest, in which one winner is selected by readers and awarded a cash prize of \$1000. Candidate images can be submitted in association with a manuscript at <http://bt.edmgr.com> or alone to the Cover Coordinator at bioeditor@BioTechniques.com.

All manuscripts and accompanying materials should be submitted at:

<http://bt.edmgr.com>.

BioTechniques
Eaton Publishing
One Research Drive, Suite 400A
P.O. Box 1070
Westborough, MA 01581-6070 USA
Phone: 508-614-1414
FAX: 508-616-2097
bioeditor@BioTechniques.com