Instructions for Authors

*Biotechnology Letters* is a rapid-publication journal that is dedicated to biotechnology as a whole – that is to topics relating to actual or potential applications of biological reactions affected by microbial, plant or animal cells and biocatalysts derived from them. All relevant aspects of molecular biology, genetics and cell biochemistry, synthetic biology and molecular engineering, of bioprocessing and biological engineering including tissue engineering and biotechnological aspects of regenerative medicine, of pre- and post-treatment steps, and of manufacturing or service operations are therefore included. Contributions from industrial and academic laboratories are equally welcome.

Before submitting their manuscripts to the journal, authors are asked to check the relevancy of their work for publication by reading the Aims and Scope that are printed in each issue of the journal and are also available from our website. *To ensure relevancy, authors should also check if citations of relevant papers previously published in this journal are included in their submitted paper.*

Editorial procedure

As *Biotechnology Letters* is a rapid-publication journal, we print directly from the electronic files submitted by authors. **No proofs are issued to authors.** It is therefore imperative that authors ensure their papers are accurate and comply with the following instructions as closely as possible.

Please note that the normal limit of papers is six printed pages in the Journal; we are prepared to accept slightly longer papers (8 pages) provided that the scientific content of the work justifies this.

Further advice on how papers should be written is given in our Guidance Notes for Authors.

Prepare your error-free manuscript as an e-mail attachment in Word or Wordperfect (not Mac). A covering letter indicating the novelty, urgency or timeliness of your communication will be appreciated.

Sections of the Journal

Please indicate on the title page to which section your paper is being submitted. The sections are:

- Animal Cell Technology
- Biofuels and Environmental Biotechnology
- Bioprocessing and Bioengineering
- Microbial and Enzyme Technology
- Plant Cell Technology
- Regenerative Medicine and Tissue Engineering

Only one section can be nominated. Please note that, if in the opinion of the Editor, the paper would be better reviewed in a different section to the one indicated, this will be done in the Editorial Office and the authors will be advised.

Reviews

Short reviews, or mini-reviews, are also published. These should be prepared according to the general instructions given below. Authors should contact either the Reviews Editor or Editor in Chief before submitting a review to ensure that the subject will be considered appropriate for inclusion.

Manuscript submission

Submission of a manuscript implies: that the work described has not been published before in whole or in part in any language; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.
Permissions

Authors wishing to include figures, tables, or text passages that have already been published elsewhere and by other authors are required to obtain permission from the copyright owner(s) for both the print and online format and to include evidence that such permission has been granted when submitting their papers. Any material received without such evidence will be assumed to originate of one of the authors.

Ethical matters

Experiments with animals or involving human patients must have had prior approval from the appropriate ethics committee. A statement to this effect should be provided within the text at the appropriate place.

Experiments involving plants or microorganisms taken from countries other than the authors’ own must have had the correct authorization for this exportation.

Online Submission

Authors should submit their manuscripts online via Editorial Manager. Please follow the hyperlink “Submit online” on the right and upload all of your manuscript files following the instructions given on the screen.

Title page

The title page should include:

- Section in which the paper is to be considered.
- An informative and clear title (see Guidance Notes). This should not contain any undefined abbreviations.
- The name(s) of the author(s).
- The affiliation(s) and address(es) of the author(s) plus email addresses of all authors.
- The email address, telephone and fax numbers of the corresponding author (only one should be nominated).

Abstract

A structured abstract is to be provided. **Objectives**: a single sentence of 35 words maximum to indicate the aim of the work. **Results**: a summary in no more than 120 words of the main findings with quantitative values of key results. This is given as a single paragraph. **Conclusion**: a single sentence of no more than 35 words to give principle conclusion. The Abstract should not contain any undefined non-standard abbreviation or unspecified references. Please also refer to the advice given in the Guidance Notes as to how an Abstract should be presented.

Abstracts for reviews can be as a single paragraph of no more than 150 words.

Keywords

Please provide up to 7 key words or phrases which can be used for indexing purposes. As this is the usual means by which other workers will find your paper, these must be chosen with great care.

Mathematical notations and nomenclature

If used, these are placed after the Abstract and Keywords but before the Introduction.

Text Formatting

Manuscripts should be submitted in Word.

Use a normal, plain font (e.g., 10-point Times Roman) for text.
Use the automatic page numbering function to number the pages, including tables, figure legends, figures and any supplementary data.

Use the automatic line numbering function to number the lines on each page either sequentially throughout the paper or on each individual page.

Do not use field functions.

Use tab stops or other commands for indents, not the space bar.

Use the table function, not spreadsheets, to make tables.

Use the equation editor or MathType for equations.

Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).

Manuscripts with mathematical content can also be submitted in LaTeX.

LaTeX macro package (zip, 182 kB)

Headings

Please use no more than three levels of displayed headings. These are NOT numbered.

Footnotes

Footnotes can be used to give additional information, which may include the citation of a reference included in the reference list. They should not consist solely of a reference citation, and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.

Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data).

Always use footnotes instead of endnotes.

Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section at the end of the text. The names of funding organizations should be written in full.

Supporting Information

Please give titles of all supplementary tables and figures plus any other additional information. This section is placed immediately before the list of references.

Additional remarks Text

Text Formatting

Manuscripts should be submitted in Word. Please use full page width (~15 cm) for the text. All the text as well as tables and figure legends should be in double-spaced typing. There are no exceptions. There should be between 22-25 lines on each page.

Abbreviations

Authors can use standard abbreviations without definition. The number of other abbreviations, however, should be kept to a minimum and only be used where useful saving of space will result. Abbreviations should be defined at first mention in each section and used consistently thereafter.

Scientific Style

- Please always use internationally accepted signs and symbols for units (SI units). The policy of the journal is to use litre (l) instead of dm$^3$; molar concentrations are given as M, mM etc. not mol l$^{-1}$ or mmol l$^{-1}$. Concentrations are to be given as 10 g glucose l$^{-1}$ (or 10 g glucose/l).
Please note that 10 g/l glucose is incorrect. Please be consistent throughout the paper and do not use the double solidus: thus 10 g/l/h is
incorrect and should be 10 g/l h or 10 g l⁻¹ h⁻¹. Contributors to this Journal are encouraged to familiarize themselves with the Journal by consulting some recently published papers.

- **Nomenclature**: insofar as possible, authors should use systematic names similar to those used by Chemical Abstract Service or IUPAC.

- **Genus and species names** should be in italics and the full binomial name should be given in full at the first mention in all sections of the paper. If more than one genus name is being used with the same initial letter, then these must be distinguished by additional letters; for example, *Staph. aureus* and *Strept. pyogenes*. Names of plants and microorganisms should be checked against the most recent and appropriate lists. (Previous names can be given in parentheses.)

- **Generic names of drugs and pesticides** are preferred; if trade names are used, the generic name should be given at first mention. Note: all trade names are given with an initial capital letter. We do not use ™ or ® symbols.

- **Please use the standard mathematical notation** for formulae, symbols, etc.: Use italics for single letters that denote mathematical constants, variables, and unknown quantities. Roman/upright for numerals, operators, and punctuation, and commonly defined functions or abbreviations, e.g., cos, det, e or exp, lim, log, max, min, sin, tan, d (for derivative).

Bold for vectors, tensors, and matrices.

**References**

**Citations**

Cite references in the text by name and year in parentheses. Some examples:

Negotiation research spans many disciplines (Thompson 2015).

This result was later contradicted by Becker and Seligman (2014).

This effect has been widely studied (Abbott 2014; Barakat et al. 2015; Kelso and Smith 2014; Medvec et al. 2015). Please note that commas (,) are not used and et al. is not in italics.

**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. References to websites should NOT be included; these should be given in text at the appropriate place.

For a letters-type paper, as is published in *Biotechnology Letters*, the number of references should not exceed about 15 or so but this is not an absolute limit.

Reference list entries should be alphabetized by the last names of the first author of each work.

**Journal article**


Ideally, the names of all authors should be provided, but the usage of “et al” in long lists of authors will also be accepted:


Please do not give issue numbers for journals cited in the references.

**Articles by DOI**

(DOI numbers should only be given for papers that are in press or are in online publications or are in obscure journals.)

Online document


Citations to theses and dissertations should NOT be given unless they are in the public domain.

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

For authors using EndNote, Springer provides an output style that supports the formatting of in-text citations and reference list.

EndNote style (zip, 3 kB)

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), given at the top of the table, 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.

Additional remarks: It is very important that tabulated data should be understandable by the reader without recourse to the text. To this end, experimental information should be given in footnotes to the table rather than in the Methods and Materials section. This information needs to be written with the greatest clarity and conciseness.

Artwork and Illustrations Guidelines

For the best quality final product, it is highly recommended that you submit all of your artwork—photographs, line drawings, etc.—in an electronic format. Your art will then be produced to the highest standards with the greatest accuracy to detail. The published work will directly reflect the quality of the artwork provided.

Electronic Figure Submission

Like tables, it is very important that the data presented in each figure can be understood by the reader without recourse to the text. To this end, you should supply sufficient information, concisely written, in the form of footnotes. Experimental information is preferentially given here rather than in the Materials and methods section. Information should not be duplicated.

Indicate what graphics program was used to create the artwork.

For vector graphics, the preferred format is EPS; for halftones, please use TIFF format. MS Office files are also acceptable.

Vector graphics containing fonts must have the fonts embedded in the files.

Name your figure files with “Fig” and the figure number, e.g., Fig1.eps.

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.

Vector graphics containing fonts must have the fonts embedded in the files.

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. Giving the magnification value is not acceptable as this may change when the photograph is printed.

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.).

Figures in online appendices (Supplementary Tables or Figures.) should be numbered separately starting at 1.
Figure Captions

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.

Figure Placement and Size

When preparing your figures, size the figures to fit into the column width: 7.5 cm single column, 16 cm double column (full page width).

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 and that Springer will not be able to refund any costs that may have occurred to receive these permissions. In such cases, material from other sources should be used. You do not need permission to use figures (or tables) that have been previously published by one of the authors of the submitted paper.

Accessibility

In order to give people of all abilities and disabilities access to the content of your figures, please make sure that

- All figures have descriptive captions (blind users could then use a text-to-speech software or a text-to-Braille hardware)
- Patterns are used instead of or in addition to colors for conveying information (color-blind users would then be able to distinguish the visual elements)
- Any figure lettering has a contrast ratio of at least 4.5:1

Electronic Supplementary Material (cited as Supplementary Table/s and/or Supplementary Figure/s)

Springer accepts electronic multimedia files (animations, movies, audio, etc.) and other supplementary files to be published online along with an article or a book chapter. 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), .wrl (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 Supplementary Table 1, Supplementary Figure 1, etc.”.

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).

Availability of Materials

By publishing the authors agree that any microbial strains, plasmids, viruses, and other materials such as prions or cell lines newly described in the articles are available in a timely fashion, free or at reasonable cost, to members of the scientific community for noncommercial purposes, if necessary via an appropriate Materials Transfer Agreement between the interested parties.

We strongly encourage the authors to deposit important strains in publicly accessible culture collections and to refer to the collections and strain numbers in the manuscript. The authors should indicate laboratory strain designations and donor source when the culture or subculture specimen is distributed by individuals.

Nucleotide and Amino Acid Sequences

Any nucleotide or amino acid sequences that were determined for the first time should be deposited to a public database, such as GenBank, EMBL or DDBJ, and the accession numbers should be included in a separate paragraph in the Materials and Methods section. Sequence data must be publicly available no later than the publication date of the article.

English language support

Authors whose first language is not English are strongly advised to have their paper checked by a native English speaker before it is submitted. If substantial editing and corrections of a manuscript are needed, the authors will be asked to seek the assistance of a professional paper writing agency as extensive re-writing cannot be carried out by the editors or editorial team.
The paper writing agency that provides language editing for scientific articles in all areas that Springer publishes is called Edanz. Details can be found in Editorial Manager under Author Main Menu - manuscript services.

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

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