

Instructions to authors

Authors are requested to follow these instructions carefully. Manuscripts not prepared accordingly will be returned to authors and this will inevitably lead to a delay in the editorial processing of the manuscript.

Please refer to our "Checklist for authors" to comply with all requirements.

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1 Aims and scope

Biotechnology Journal (BTJ) is the new, international resource for both biotechnology researchers and professionals in related disciplines. Fully comprehensive in its scope, the journal publishes strictly peer reviewed papers covering novel aspects and methods in all areas of biotechnology, especially those focusing on healthcare, nutrition or biosafety, and methods and advances. Special attention is also paid to the public, legal, ethical and cultural aspects of biotechnological research in the Forum section. Most issues are devoted to a special topic, providing the latest comprehensive information on the most crucial areas of research and technological advances.

Alongside each highlighted topic, the journal contains original papers in the form of research articles, short communications and technical reports, illustrating the latest research results. BTJ welcomes submission of papers in areas including DNA/protein engineering, all -omics fields (genomics, proteomics, metabolomics, systems biology *etc.*), bioinformatics (algorithms and modeling), imaging, analytical biotech (sensors/detectors for analytes/macromolecules), plant/agricultural, food or environmental biotechnology, health and therapeutical biotechnology (including antisense/siRNAs, enzymes, peptides...), regenerative medicine (stem cells, tissue engineering and biomaterials), translational immunology (antibody engineering, xenotransplantation, T-cell therapies), and biosafety or biosecurity.

BTJ promotes a special emphasis on:

- Systems Biotechnology
- High-Throughput and Microarray Technologies
- Synthetic Biology and Metabolic Engineering
- Nanobiotechnology
- Translational Biotechnology and Applied Microbiology
- Methods and Advances
- Biosafety, biotech ethics, science communication

A more detailed list of topics is shown below:

- **Red (medical) biotech:** stem cells, therapeutic cloning (somatic cell nuclear transfer), tissue engineering, xenotransplantation
 - **DNA or RNA therapeutics:** gene therapy, targeting, immunogenecity...
 - **Vaccines and applied immunology:** antibody engineering, T-cell therapies, therapies exploiting innate immunity (e.g.

complement), antigen delivery vectors and approaches, nucleic acid vaccines

- **White (industrial) biotech:** chemical synthesis by bacteria, yeast or other organisms, use of enzymes as industrial catalysts, biopharmaceutics
- **Green biotech:** Crop improvement (resistance to stress, disease, pests), nutraceuticals, forest biotech, plant vaccines or bioreactors, biosecurity and gene-containment strategies, microbial biodegradation, food biotech, environmental biotech: bioremediation, biomining, phytoremediation, monitoring
- **Methods and advances in biotech**
 - **Genetic engineering:** manipulating gene structure and control of gene expression, approaches for evolution and protein design (antibodies, enzymes, drugs...),
 - **Metabolic engineering:** genetic manipulation of species of interest to modify or allow the production of a commercially or therapeutically relevant compound
 - **Omics:** (Meta)genomics, structural genomics, gene function analysis (*e.g.*, arrays, SAGE), pharmacogenomics (SNPs), gene structure analysis, chemogenomics, proteomics (*e.g.*, mass spectrometry, yeast two hybrid, arrays and chips, NMR, SPR), metabolomics (chromatography, mass spectrometry)
 - **Orange biotech:** yeast as a tool to test engineering or screening assays
 - **Blue biotech:** marine genomics, enzyme and drug screening
 - **Expression systems** in mammalian, insect, bacterial, fungi or plant cells
 - **Drug (or gene or cell) delivery:** viral or non-viral strategies
 - **Imaging:** novel organism/cell/molecular imaging techniques, high throughput imaging tools for drug screening, fluorescence microscopy, electron microscopy/tomography, confocal imaging...
 - **Biomaterials:** engineering materials for biological application, molecular imprinting, biomimetics
 - **Nanobiotech:** nanomaterials for industrial (white) biotech, drug delivery therapeutics, nanosensors, nanosystems for imaging
 - **Pharming:** transgenic animals, knockouts, reproductive cloning, biopharmaceutical and enzyme production, transgene targeting and expression strategies
 - **Computational analysis** of all topics mentioned above (modeling, algorithms, data deconvolution)
- **Biosafety, biotech ethics, science communication**

Scientific contributions

Four categories of scientific contributions are accepted for publication:

- Reviews
- Research Articles
- Short Communications
- Technical Reports

Other contributions

- Commentary or Highlight Article
- Forum Contribution: Short columns up to longer reports covering one of the following topics:
 - Important publications and awards
 - Institute or company highlights
 - New trends or policies
 - Meetings reports
 - Industry highlights
 - Biotechnology vs. society issues
 - Biotech around the world

You may contact us at biotechnology-journal@wiley.com before writing or submitting a contribution to the Forum.

Please note that our **Early View online publication** is updated weekly and enables papers to be available online and citable within 6 weeks of acceptance.

Readership

Biotechnologists · Microbiologists · Engineers · Medical and pharmaceutical scientists · Food and nutrition scientists · Agriculturists · Environmental scientists · Patent lawyers · Public authorities

2 General terms of publication

The author vouches that the work has not been published elsewhere, either completely, in part, or in any other form and that the manuscript has not been submitted to another journal. The submitting author (listed under "Correspondence") accepts the responsibility of having included as coauthors all persons appropriate and none inappropriate. The submitting author certifies that all coauthors have seen a draft copy of the manuscript and agree with its publication.

All scientific contributions will be peer-reviewed on the criteria of originality and quality. Authors may suggest up to five potential referees, including their e-mail addresses, as well as individuals whom they wish to be excluded from the review process. On acceptance, papers may be subjected to editorial changes.

A revised paper will retain its original date of receipt only if it is resubmitted to the Editors within three months after revision was requested. Responsibility for the factual accuracy of a paper rests entirely with the author.

Upon acceptance of the manuscript the author is required to fill in the "Copyright Transfer Agreement", sign it and submit it to the Editorial Office.

Editorial Office

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Manuscripts and artwork will not be returned following publication.

Please note that after acceptance of a paper changes or additions to the manuscript and its data are not permitted. Errors in published papers should be submitted directly to the publisher.

The *Biotechnology Journal* publishes articles in English. Manuscripts must be grammatically and linguistically correct, and authors less familiar with English usage are advised to seek the help of English-speaking colleagues. American spelling is preferred. Authors in Japan please note that Wiley-Japan can provide authors in Japan with a list of recommended services to check and improve the English in their papers before submission. Please contact our Wiley-Japan office by Fax: 81 3 3556 9763

or E-mail: editorial@wiley.co.jp for more information, stating the Wiley journal you wish to submit to.

3 Ethics

Please note that the Ethical Guidelines to Publication of Chemical Research issued by the American Chemical Society are followed and applied by the Editors of *Biotechnology Journal*.

Publishing misconduct

All instances of publishing misconduct, including, but not limited to, plagiarism, data fabrication, image/data manipulation to falsify/enhance results *etc.* will result in rejection/retraction of the manuscript.

If the manuscript describes experiments using animals, the permission of the national or local authorities (giving the permission or accreditation number of the laboratory and of the investigator) should be stated. If no such rules or permission are stipulated in the particular country, this must also be mentioned in the paper. In the case of human studies, it should be stated that local Ethical Committee approval has been received and that the informed consent of all participating subjects was obtained.

Sharing of materials

All materials and reagents that are not commercially available (antibodies, cell lines, constructs *etc.*) and associated protocols detailed in manuscripts published in *Biotechnology Journal* are to be freely available to academic researchers in a timely manner upon request. The authors agree to this condition by submitting a manuscript to *Biotechnology Journal*.

4 Online submission of manuscripts

Biotechnology Journal (BTJ) offers a web-based manuscript submission and peer review system. This service guarantees fast and safe submission of manuscripts and rapid assessment process. Usage of this system is obligatory, conventional submission of manuscripts is not accepted.

To submit your manuscript online, please proceed along the following steps:

- Prepare your manuscript and illustrations in the appropriate format, according to the instructions given below (see Sections 4 to 8). Please also make sure that your paper conforms to the scientific and style instructions of *Biotechnology Journal* as given herein. You can also find a link to these instructions at the submission site at <http://mc.manuscriptcentral.com/btj/> or on the homepage of the journal at <http://www.biotechnology-journal.com> under the link "For Authors".
- If you have not already done so, create an account for yourself in the system at the submission site, <http://mc.manuscriptcentral.com/btj/> by clicking on the "Create an Account" button.
- Please be sure to study the "Instructions and Forms" given on the journal homepage carefully, and then let the system guide you through the submission process. Online help is available to you at all times during the process. You are also able to exit/re-enter at any stage before finally "submitting" your work. All submissions are kept strictly confidential. If you have any questions concerning the online submission program, do not hesitate to contact the editorial support at biotechnology-journal@wiley-vch.de. To monitor the progress of your manuscript throughout the review process, just login periodically and check your Author Center.
- All submissions will be converted to PDF format during the upload process. The system automatically generates one PDF file which contains all parts of the manuscript.

Cover Letter

The manuscript should be accompanied by a letter of transmittal that should state why the paper is suitable for publication in the Journal and include the following FIVE statements:

- 1) All authors concur with the submission.
- 2) The work has not been published elsewhere, either completely, in part, or in another form.
- 3) The manuscript has not been submitted to another journal and will not be published elsewhere within one year after its publication in this journal. Publication in any reasonably retrievable source constitutes prior publication. Meeting abstracts or preprints do not constitute prior publication.
- 4) The manuscript does/does not contain experiments using animals. The permission of the national or local authorities (giving the permission or the accreditation no. of the laboratory and of the investigator) should be stated if animal experiments are included. If no such rules or permissions have been implicated in the particular country, this must be stated.
- 5) The manuscript does/does not contain human studies. If such studies are included, it should be stated that local Ethical Committee approval was received for the studies and that the informed consent of all participating subjects was obtained.

Permission statements relating to points 4 and 5 should also be included in the text of the manuscript.

5 Types of contributions

5.1 Scientific contributions

Four types of scientific contributions are considered for publication:

1. *Research Articles* describing complete investigations. Unsolicited original papers should not exceed 6500 words; this includes references, figure legends and tables. Longer manuscripts will be considered but only if the increased length is a reflection of the amount of data presented and not a reflection of the inclusion of unnecessary information. Manuscripts may not have been published previously, except in the form of a preliminary communication.
2. *Reviews* will normally be invited by the Editor. Authors wishing to submit a review article should send a brief outline of its contents to the Editor-in-Chief before the manuscript is drafted. A review should not exceed 8000 words.
3. *Short Communications* describing results that are brief, timely and/or of such importance that rapid publication is warranted. These manuscripts should bear the words "Short Communication" immediately above the title on the first page. They should not be subdivided into titled sections but should be written in a continuous style. Short communications should not exceed 2500 words and contain no more than two figures and one table.
4. *Technical Reports* will describe the development of a novel method or an improvement or noteworthy modification of an already existing technique or platform used in biotechnology. These manuscripts should bear the words "Technical Report" immediately above the title on the first page. A technical brief is a short description (maximum 4000 words) written in a continuous style with no more than two figures and one table.

5.2 Other contributions

- Commentary or Highlight Article: up to 6000 words, few or no references, no abstract, figures encouraged.
- Forum contribution: 150–2000 words, few or no references, no abstract. In forum columns color figures are free of charge. Longer articles can, but do not have to, be divided in subtitles.

6 Format and style of manuscripts

Manuscripts should be submitted in English. American or British spelling can be used provided that only one spelling style is consistently used throughout. Manuscripts must be typewritten with double spacing throughout (i.e. including references, Tables, legends, etc.) using a page setup that leaves margins of 3.5 cm on all sides. For essential information on preparing manuscripts, please see the section 'Guidelines for the preparation of electronic data'.

Contents of first page of manuscript

The first page of the manuscript should contain only the following:

- 1) *Title* of the paper containing only the most important keywords pertaining to the subject matter. Only standard abbreviations should be used in the title.
- 2) *Full names* (including first name) of the authors and the name of their institute(s). If the publication originates from several institutes the affiliations of all authors should be clearly stated by using superscript numbers after the name and before the institute.
- 3) *Keywords* (3 to 5).
- 4) *Name, title and full postal address* of the author to whom all correspondence (including galley proofs) is to be sent. This should include fax and telephone numbers, and e-mail address.
- 5) *A list of abbreviations* used in the paper excluding standard abbreviations (see list of "Standard Abbreviations" in the Appendix).

Abstract

The second and (if necessary) third page of the manuscript should contain the abstract only. This must be self-explanatory and intelligible without reference to the text. It should not exceed 200 words. Only standard abbreviations are allowed.

Division into sections

Research Articles should be divided into the following sections: "1 Introduction": containing a description of the problem under investigation and a brief survey of the existing literature on the subject. "2 Materials and methods": for special materials and equipment, the manufacturer's name and if possible the location should be provided. "3 Results" "4 Discussion" "5 References"

Sections 3 and 4 may be combined to a section 3 and should then be followed by a short section entitled "4 Concluding remarks". Subdivisions of sections should be indicated by subheadings.

References

References, including those in tables and figure legends, should be numbered sequentially in the order in which they appear in the text. The numbers should be set in square brackets in the text i.e. [2, 18]. References are to be collected in numerical order at the end of the manuscript under the heading "References", they should also be typed with double spacing throughout.

Titles of journals should be abbreviated according to the practice of PubMed. The abbreviated title and the volume number should be in italics. If necessary, cite unpublished or personal work in the text but do not include it in the reference list. The DOI for the reference should be included at the end of the reference, if no print reference is available. Abstracts and posters in meeting books must not be cited unless they are generally accessible.

Please note that website addresses must not be included as a reference but should be inserted in the text directly after the data to which they refer.

A link to the latest End Note style sheet can be found on the homepage www.biotechnology-journal.com under the link "For Authors".

Responsibility for the accuracy of bibliographic references rests entirely with the author.

Please note the following examples:

Journals:

- [1] Liebeton, K., Eck, J., Identification and Expression in *E. coli* of novel nitrile hydratases from the metagenome. *Eng. Life Sci.* 2004, 4, 557–562.
- [2] Schmoekel, F. E., Weber, J. C., Schense, J. C., Gratz, K. W. *et al.*, Bone repair with a form of BMP-2 engineered for incorporation into fibrin cell ingrowth matrices. *Biotechnol. Bioeng.* 2005, DOI: 10.1002/bit.20168.

Books:

- [3] Geis, A., Perspectives of genetic engineering of bacteria used in food fermentations, in: Heller, K. J. (Ed.), *Genetically Engineered Food – Methods and Detection*, Wiley-VCH Verlag, Weinheim 2003, pp. 100–118.
- [4] Chrisou, P., Klee, H. (Ed.), *Handbook of Plant Biotechnology*, John Wiley & Sons, 2004

Note that

- Papers with multiple authors should be limited to listing the first four authors, followed by *et al.*
- Papers published online in advance of print should be cited with their DOI.
- Other serial publications should be cited in the same manner as journals.

Acknowledgements

Acknowledgements as well as information regarding funding sources should be provided on a separate page and will appear at the end of the text (before "5 References").

Conflict of interest statement

All authors must declare financial/commercial conflicts of interest. Even if there are none, this should be stated in a separate paragraph following on from the acknowledgements section as follows: "The authors have declared no conflict of interest." This is a mandatory requirement for all articles.

Tables

Tables with suitable captions at the top and numbered with Arabic numerals should be collected at the end of the text on separate sheets (one page *per* table). Column headings should be kept as brief as possible and indicate units. Footnotes to tables should be indicated a), b), c) *etc.* and typed on the same page as the table.

Supporting information

Extensive tables (more than 5 typewritten pages) should be published online as supporting information. This material will neither be copy-edited nor typeset so authors should prepare this in the final form. Also for this reason there will be no galley proofs of this material. Supporting information will be made freely available on the web (similar to the table of contents and the article abstracts). Authors are permitted to place this material on their homepages when they are setting up a link to the fulltext version of the article in Wiley InterScience.

Further, other files may be submitted as supporting information (*e.g.*, animations, video sequences). Please contact the Editorial Office at the publishing house (biotechnology-journal@wiley.com) for suitable file formats. All supporting information will also undergo the peer review process. Thus, this material has to be submitted electronically along with the main body of the article. It is in the hands of the Editor-in-Chief to decide which part of the manuscript will be published as supporting information.

Figures and legends

Figures should be numbered in the order of their appearance in the text with Arabic numerals. Each Figure must have a separate legend, which should be self-explanatory and allow readers to understand the data presented without reference to the main text.

The legends should not appear under the figures, but be gathered in a separate section (Figure legends) after the references. Figures should be submitted on separate pages at the end of the article (new page for each complete Figure).

The responsibility for providing permissions to reprint Figures and Tables and any associated costs rests entirely with the author.

Colored figures can only be printed if the author is prepared to pay the cost incurred (EUR 595 for one Figure, 990 for two, 1485 for three and 1980 for four including VAT). The online article should be identical to the printed version but colored figures can be published online as Supporting information.

For **essential** information on preparing Figure files, please see the section 'Guidelines for the preparation of electronic data', subheading 'Figures'.

Statistical analysis – standard requirements

Full statistical analysis of your data should be detailed in the manuscript, preferably in the Figure legends to allow each Figure to be easily understood without reference to the main text of the article. The name of each statistical test used and the results obtained (including a description of the comparisons made to obtain the p values, if not clearly indicated in the Figures themselves) should be stated. The number of samples, experiments, replicates *etc.* should be detailed; data presentation (mean \pm SD or SEM *etc.*) should be noted. Authors are encouraged to analyze data across multiple experiments, if at all possible, and should note that analyzing replicates within a single experiment does not provide information regarding experimental reproducibility.

Image manipulation

Manipulation of images is strongly discouraged and all figures must accurately reflect the original data. Information should not be enhanced, eliminated, added, obscured or moved. In cases where manipulation is unavoidable, this should be clearly detailed in the Figure legend. All instruments, software and processes used to obtain the images must be fully detailed in the manuscript either in the Figure legends or the Materials and Methods. Acceptable image manipulation includes uniformly adjusting the contrast of an entire image, and any control images, ensuring that all original data, including the background, remains visible and that no new features are introduced. Cropping of gels, or re-positioning of lanes/fields, is permitted providing that all alterations are clearly indicated by the use of dividing lines in the image itself, vital data are not removed and an explanation of the alterations is included in the Figure legend. Unacceptable manipulation includes, but is not limited to, the enhancement of one feature/band over others, removal of background noise/bands and so on. Authors must be able to produce all data in their raw format upon editorial request.

Biographic material

Corresponding authors of review articles are invited to submit a portrait photograph of themselves and a short biographical text (no more than 80 words) which will appear at the very end of the article.

Structural formulae

Structural formulae should be drawn in the manuscript at the position where they belong. They may be numbered in the order of their appearance with Arabic numerals in parentheses.

Equations

Mathematical and chemical equations are to be written in the manuscript at the place in which they belong and should be marked by Arabic numerals in parentheses in the right margin in the order of their appearance.

Abbreviations

Abbreviations are hindrances to a reader working in a field other than that of the author, and to abstractors. Therefore, their use should be restricted to a minimum. Abbreviations should be introduced only when repeatedly used. Abbreviations used only in a table or a figure may be defined in the legend. No abbreviations should be used in the title and keywords. If standard abbreviations are used in the Abstract they must be defined in the Abstract. If nonstandard abbreviations are used in the Abstract they should be defined in the Abstract, in the list of abbreviations of the manuscript, as well as upon their first use in the body of the paper.

The Appendix at the end of these instructions contains a list of abbreviations which may be used without definition in the articles published in this journal.

7 Guidelines for the preparation of electronic data

7.1 Text

- The main text (incl. front material) as well as figure legends and tables (in this order) should be provided in one file, preferably saved in DOC or RTF format. Please use the “Save As” option in Word to save your document as an older (.doc) file type.
- Data should be typed unjustified, without hyphenation except for compound words. Use carriage returns only to end headings and paragraphs; spacing will be introduced by the typesetter.
- Do not use the space bar to make indents; where these are required (e.g., tables) use the TAB key.
- If working in Word for Windows, please create special characters through Insert/Symbol.

7.2 Figures

- For initial submission, it is not necessary to submit graphics with high resolution; however, if your manuscript is accepted, high resolution graphics will be required as detailed in this section.
- Crop, or scale, art to the size intended for publication; no enlargement or reduction should be necessary. If this is not possible, Figures should be submitted in a format which can be reduced to publication size i.e. a width of 55–85mm or 120–175mm.
- Figure panels should be indicated by capital letters (A, B, C etc).
- As far as possible, all comparable labels should have the same size lettering, and the font size should be consistent throughout the Figures. Use standard fonts such as Times, Times New Roman, Arial and Helvetica. Symbols and labels should be a height of 1.5–2.0 mm **at their final published size**.
- Make sure that any labeling is legible against the background, and that lines are of a suitable thickness. The recommended minimum line weight is 0.3 pt for black lines on a light background, and 0.4 pt for white lines on a black background; do not define lines as ‘hairline’ width.
- Gridlines are not allowed except for log plots.
- Remove excess space and elements from around the image. Type, lines or other elements not intended for publication should be removed before submission.
- Make the image orientation the same as that intended for publication.
Flatten images prior to submission, i.e. they should not contain layers and/or transparent objects.

- Figures should preferably be in TIFF or PPT format. Most artwork packages can ‘Save as...’ or ‘Export...’ images as TIFF files. This is preferable to saving in the native format of that program.
- Figures supplied electronically should have the following resolution **at their final published size:**

Type	Resolution
Graphs	800–1,200 DPI
Photos	400–800 DPI
Color (only CMYK)	300–400 DPI
- Do not use higher resolutions than those given in the Table above as these will not improve the quality of your image but will produce very large files.
- An easy way to check the quality (resolution) of Figures files is to use the zoom function; **if an image is viewed at 400% on screen and is blurry (pixellated) then the image is probably not of high enough resolution and will not reproduce well in print.** An image viewed at 100% on screen may look fine but will not necessarily reproduce well. This is a result of screen resolution being much lower (only 72–96 dpi) than that of a printing press.
- Changing the size of a digital image changes the resolution; however, as the area is increased the overall dpi actually remains the same; as an example, a photographic image that is three inches (76.2 mm) across at final size should be saved as TIFF with a width of 900 pixels (final size: 3 in; resolution: 300 dpi). If the size is increased to six inches, a width of 1800 pixels would be required to obtain a resolution of 300 dpi.
- Images (photos) with lettering should be saved at a higher resolution (minimum 600 dpi) than a photographic image alone (minimum 400 dpi) to avoid the text and line art appearing jagged.
- Photographic images often produce very large files; however, most software has an option to compress the file using LZW compression and this will produce smaller files, especially when the image contains large areas of single color or repeating textures and patterns.
- Keeping an image simple is the best way to produce good output. Try to avoid adding more to your graph or illustration than is necessary. Avoid 3D charts, excessive shading, stipples, lines and symbols (if there are several symbols, try and add them to the legend rather than a key). When using shades of grey or other tints, be wary of using shades too close together – an ideal separation is 20%.
- Remember that supplying high-quality electronic artwork can reduce delays in production time as it minimizes the need for artwork to be resupplied.

8 Revised manuscripts

The revised manuscript, as a file, on which all alterations are clearly marked and visible, should be submitted via the submission site, <http://mc.manuscriptcentral.com/btj>. The option to create and submit a revised manuscript will be available when appropriate. The revised manuscript must be accompanied by a point-by-point letter summarizing the changes that have been made in response to the referees’ comments. Changes should also be highlighted in the text document. Only original file formats (no PDF) will be accepted.

Please note that when revised manuscripts are submitted online, only the changed files need to be replaced. The generated PDF is used for re-evaluating the manuscript.

9 Proofs and reprints

Proofs will be sent as low-resolution PDF-file by e-mail together with a reprint order form. To view all changes made by the copy-editor, you may refer to the latest version of your manuscript with track changes in your Author Centre (<http://mc.manuscriptcentral.com/btj>). The proofs should be carefully cor-

rected following the instructions. The proofs together with the reprint order form should be filled out **even if reprints are not required**, and returned, preferably by fax (+49 6201 606 525), to the Editorial Office within 48 h. Reprints which are ordered later in the production process are more expensive.

Authors will be charged for extensive alterations of their article. Reprints and/or high resolution PDF can be ordered at prices shown on the reprint order form. Upon publication, the submitting author (listed under "Correspondence") will receive a complimentary copy of the issue containing the article. Reprints always have the BTJ cover page of the issue in which the article is printed.

10 Online open

Wiley is now offering an online open service for authors of journal articles whose funding agency requires deposit of an article in an archive. Authors have the option of paying a fee to ensure that their articles are available to non-subscribers upon publication via Wiley InterScience (<http://www.interscience.wiley.com>), Wiley's online publishing platform, as well as the author's funding agency's preferred archive if applicable. Only authors of primary research articles qualify for this service. Wiley will deposit the final PDF of the article into the funder's archive; this is the final, authoritative version of the article after peer review, editing, any final corrections, online and print formatting, and publication. The fee for ensuring articles are made available through the funded access program is \$3000 USD (also payable in Euros) per article. Please contact the editorial office for more information.

11 Funding agents

Authors are requested to state their funding agents in the manuscript acknowledgements.

NIH Public Access Mandate

The *Biotechnology Journal* is fully compliant with NIH requirements and Wiley-Blackwell will, as a service to its authors, upload all required files to PubMedCentral. You, as an author, **do not need to upload any files**. For further information, please visit www3.interscience.wiley.com/aboutus/open_access_options.html#NIH_mandate

Howard Hughes Medical Institute authors

The Howard Hughes Medical Institute (HHMI) and Wiley-Blackwell have agreed to make post-peer reviewed author manuscripts of articles funded by HHMI publicly available six months following final publication. **This policy will be implemented for those articles published after October 1, 2007. This arrangement requires nothing of the grantee; identification and deposit are the responsibility of the publisher.** Further information can be found at www3.interscience.wiley.com/aboutus/open_access_options.html#Howard_Hughes

Wellcome Trust authors

Please see the information in the section 'Online Open', a service that enables authors to comply with the Wellcome Trust funding requirements regarding publication access. Further information can be found at www3.interscience.wiley.com/aboutus/open_access_options.html#Wellcome_Trust

12 Publishing misconduct

All instances of publishing misconduct including, but not limited to, plagiarism, data fabrication, image/data manipulation to falsify/enhance results etc. will result in rejection/retraction of the

manuscript. Furthermore, the corresponding author's home institution and funding agency will be informed of the malpractice.

COPE

This journal endorses the COPE (Committee on Publication Ethics) guidelines and will pursue cases of suspected research and publication misconduct (e.g. falsification, fabrication, plagiarism, inappropriate image manipulation, redundant publication). In such cases, the journal will follow the processes set out in the COPE flowcharts <http://publicationethics.org/flowcharts>.

13 Sharing of materials

All materials and reagents that are not commercially available (antibodies, cell lines, constructs etc.) and associated protocols detailed in manuscripts published in BTJ are to be freely available to academic researchers in a timely manner upon request. The authors agree to this condition by submitting a manuscript to BTJ.

14 Reporting specific data

Chemical structures

Structures should be produced with the use of a drawing program such as ChemDraw. Structure drawing preferences are as follows:

- As drawing settings select:
 - chain angle 120°
 - bond spacing 18% of width
 - fixed length 14.4 points (0.508 cm, 0.2 in.)
 - bold width 2.0 points (0.071 cm, 0.0278 in.)
 - line width 0.6 point (0.021 cm, 0.0084 in.)
 - margin width 1.6 points (0.056 cm, 0.0222 in.)
 - hash spacing 2.5 points (0.088 cm, 0.0347 in.)
- As text setting select: font, Arial or Helvetica; size, 10 pt.
- Under the preferences choose: units, points; tolerances, 3 pixels.
- Under page setup choose: paper, US Letter; scale, 100%.
- Using the ChemDraw ruler or appropriate margin settings, create structure blocks, schemes, and equations having maximum widths of 11.3 cm (one-column format) or 23.6 cm (two-column format). Note: if the foregoing preferences are selected as cm values, the ChemDraw ruler is calibrated in cm. Also note that a standard sheet of paper is only 21.6 cm wide, so all graphics submitted in two column format must be prepared and printed in landscape mode.
- Use boldface type for compound numbers but not for atom labels or captions.
- Authors using other drawing packages should, as far as possible, modify their program's parameters to reflect the above guidelines.

Physical and other data

It is important that novel compounds, either synthetic or isolated / produced from natural sources, be characterized completely and unambiguously. Supporting data normally include physical form, melting point (if solid), UV / IR spectra if appropriate, ¹H and ¹³C NMR, mass spectral data, and optical rotations or CD information (when compounds have chiral centers).

Reports on flavor constituents should conform to the recommendations made by the International Organization of the Flavor Industry (IOFI). Thus, any identification of a substance has to be done by the latest form of available analytical techniques. In general, any particular substance must have its identity confirmed by at least two methods; that means, in practice, comparison of chromatographic and spectroscopic data (which may include GC, MS, IR, and NMR) with those of an authentic sample.

If only one method has been applied, the identification has to be labeled as “tentative”. This is also valid in case of identification performed only by comparison of literature data.

Equations should be numbered consecutively and referred to in the text; e.g. “defined as in Eq. (1)”.

Physical data should be quoted with decimal points (e.g. 25.8 J/K/mol), and arranged as follows where possible – but in any event in the same order within the manuscript (when measurement conditions remain unchanged they need only be mentioned once, for instance in the column headings): m.p./b.p. 20°C; $[\alpha]_D^{20} = -13.5$ ($c = 0.2$ in acetone); $^1\text{H NMR}$ (200 MHz, $[\text{D}_6]\text{THF}$, 25°C, TMS): $\delta = 1.3$ (q, $^3J(\text{H,H}) = 8$ Hz, 2 H; CH_2), 0.9 ppm (t, $^3J(\text{H,H}) = 8$ Hz, 3 H; CH_3); IR (Nujol): $\nu = 1790$ cm^{-1} (C=O); UV/Vis (n -hexane): $\lambda_{\text{max}}(\epsilon) = 320$ (5000), 270 nm (12000); MS (70 eV): m/z (%): 108 (20) $[\text{M}^+]$, 107 (60) $[\text{M}^+ - \text{H}]$, 91 (100) $[\text{C}_7\text{H}_7^+]$. Plane angles in products of units can have either ° or deg as the unit.

Nomenclature, symbols, and units: The rules and recommendations of the International Union of Pure and Applied Chemistry (IUPAC), the International Union of Biochemistry (IUB), and the International Union of Pure and Applied Physics (IUPAP) should be adhered to.

Flow cytometry

Flow cytometry experiments should be MIFlowCyt (Minimum Information about a flow cytometry experiment) compliant. See www.isac-net.org (in particular the documents www.isac-net.org/media/standards/miflowcyt/MIFlowCyt_080221.pdf and www.isac-net.org/media/standards/miflowcyt/latest.pdf), <http://flowcyt.sourceforge.net/> or www.mibbi.org/ for further information.

Revised January 2009

Nucleotide and protein sequences Nucleotides

New nucleotide data must be submitted and deposited in the DDBJ/ EMBL/GenBank databases and an accession number obtained before the paper can be accepted for publication. Submission to any one of the three collaborating databanks is sufficient to ensure data entry in all. The accession number should be included in the manuscript, e.g., as a footnote on the title page: ‘Note: Nucleotide sequence data reported are available in the DDBJ/EMBL/GenBank databases under the accession number(s)---’. If requested the database will withhold release of data until publication. The most convenient method for submitting sequence data is by World Wide Web:

EMBL via Webin:

<http://www.ebi.ac.uk/embl/Submission/webin.html>

GenBank via BankIt:

<http://www.ncbi.nlm.nih.gov/BankIt/>

DDBJ via Sakura: <http://sakura.ddbj.nig.ac.jp>

Alternatively, the stand-alone submission tool ‘Sequin’ is available from the EBI at <http://www3.ebi.ac.uk/Services/Sequin> and from NCBI at

<http://www.ncbi.nlm.nih.gov/Sequin/>

For special types of submissions (e.g., genomes, bulk submissions etc.) additional submission systems are available from the above sites.

Database contact information:

EMBL: EMBL Nucleotide Sequence Submissions
European Bioinformatics Institute
Wellcome Trust Genome Campus,
Hinxton,
Cambridge CB10 1SD U.K.
Tel.: +44 1223 494400;
fax: +44 1223 494472
E-mail: datasubs@ebi.ac.uk
WWW URL: <http://www.ebi.ac.uk>

GenBank: National Center for Biotechnology
Information
National Library of Medicine, Bldg. 38A,
Rm 8 N-803
Bethesda, MD 20894, USA
Tel.: +1 301 496 2475;
fax: +1 301 480 9241
E-mail: info@ncbi.nlm.nih.gov
WWW URL: <http://www.ncbi.nlm.nih.gov>

DDBJ: Center for Information Biology and DNA
Data Bank of Japan
National Institute of Genetics, 111 Yata,
Mishima, Shizuoka 411-8540, Japan
Tel.: +81 559 81 6853;
fax: +81 559 81 6849
E-mail: ddbj@ddbj.nig.ac.jp
WWW URL: <http://www.ddbj.nig.ac.jp>

Proteins: Protein sequences, which have been determined by direct sequencing of the protein, must be submitted to Swiss-Prot at the EMBL Outstation – The European Bioinformatics Institute. Please note that we do not provide accession numbers, IN ADVANCE, for protein sequences that are the result of translation of nucleic acid sequences. These translations will automatically be forwarded to us from the EMBL nucleotide database and are assigned Swiss-Prot accession numbers on incorporation into TrEMBL.

Results from characterization experiments should also be submitted to Swiss-Prot at the EBI. This can include such information as function, subcellular location, subunit etc.

Contact information:

Swiss-Prot submissions, European Bioinformatics
Institute
Wellcome Trust Genome Campus, Hinxton
Cambridge, CB10 1SD, UK
Tel.: +44 1223 494400;
fax: +44 1223 494472
E-mail: datasubs@ebi.ac.uk (for sequence submissions); update@ebi.ac.uk (for characterization information)
WWW URL: <http://www.ebi.ac.uk>

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Appendix**Standard abbreviations**

The abbreviations as listed below may be used without definition in the articles published in the journal:

Please refer to Section 6 about the correct usage of abbreviations in *Biotechnology Journal*.

A absorbance	Mbp megabase pairs
amu atomic mass unit	MES 2-(<i>N</i> -morpholino)-ethanesulfonic acid
bp base pairs	MOPS 3-(<i>N</i> -morpholino)-propanesulfonic acid
BLAST Basic Local Alignment Search Tool	<i>Mr</i> relative molecular mass (dimensionless)
BSA bovine serum albumin	MS mass spectrometry
CBB Coomassie Brilliant Blue	<i>m/z</i> mass-to-charge ratio
CCD charge-coupled device	NMR nuclear magnetic resonance
cpm counts <i>per</i> minute	NP-40 Nonidet P-40
CV coefficient of variation	OD optical density
1-D one-dimensional	ORF open reading frame
2-D two-dimensional	PAGE polyacrylamide gel electrophoresis
Da dalton (molecular mass)	PBS phosphate-buffered saline
2-DE two-dimensional gel electrophoresis	PC personal computer
DMEM Dulbecco's modified Eagle medium	PCR polymerase chain reaction
DMF <i>N,N</i> -dimethylformamide	PEG polyethylene glycol
DMSO dimethyl sulfoxide	PFGE pulsed-field gel electrophoresis
DOC sodium deoxycholate	PFU plaque-forming units
dsDNA double-stranded DNA	<i>pI</i> isoelectric point
DNA Deoxy-ribo Nucleic Acid	PMS phenazine methosulfate
DTT dithiothreitol	PMSF phenylmethylsulfonyl fluoride
ECL enhanced chemiluminescence	ppm parts <i>per</i> million
EDTA ethylenediaminetetraacetic acid	PVA polyvinyl alcohol
EGTA ethylene glycol-bis (β -aminoethylether)- <i>N,N,N',N'</i> -tetraacetic acid	PVDF polyvinylidene difluoride
ELISA enzyme-linked immunosorbent assay	RFLP restriction fragment length polymorphism
EST expressed sequence tag	RIA radioimmunoassay
EU European Union	rpm rotations <i>per</i> minute
FITC fluorescein isothiocyanate	RSD relative standard deviation
GC gas chromatography	RT-PCR reverse transcriptase-PCR
GIF graphic interchange format	SAGE serial analysis of gene expression
GM genetically modified	SD standard deviation
GST glutathione- <i>S</i> -transferase	SDS sodium dodecyl sulfate
HEPES <i>N</i> -(2-hydroxyethyl)-piperazine-2'- <i>(2</i> -ethanesulfonic acid)	SEM standard error of the mean
HGP human genome project	S/N signal-to-noise ratio
HPLC high-performance liquid chromatography	SSCP single-strand conformation polymorphism
HSA human serum albumin	ssDNA single-stranded DNA
HTML hypertext mark-up language	STR short tandem repeat
HVR hypervariable region	%T total gel concentration (acrylamide plus cross-linking agent; g/100 mL)
IP intellectual property	TBS Tris-buffered saline
IT ion trap	TCA trichloroacetic acid
kbp kilobase pairs	TEMED <i>N,N,N',N'</i> -tetramethylethylenediamine
kDa kilodalton (molecular mass)	TFA trifluoroacetic acid
LC liquid chromatography	TLC thin-layer chromatography
LED light-emitting diode	Tris Tris-hydroxymethylaminomethane
LOD limit of detection	U unit
LOQ limit of quantitation	URL uniform resource locator
mAb monoclonal antibody	US United States
MALDI-MS matrix-assisted laser desorption/ionization – mass spectrometry	UV ultraviolet
	Vh volt x hours
	WWW World Wide Web

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Books: [3] Geis, A., Perspectives of genetic engineering of bacteria used in food fermentations, in: Heller, K.J. (Ed.), <i>Genetically Engineered Food – Methods and Detection</i> , Wiley-VCH Verlag, Weinheim 2003, pp. 100–118. [4] Chrisou, P., Klee, H. (Ed.), <i>Handbook of Plant Biotechnology</i> , John Wiley & Sons, 2004. Note that – The BTJ format is now available in Endnote – When more than 5 authors: list 4, <i>et al.</i> – Papers in press: cite DOI. – Other serial publications: cite like journals – Website addresses not as references but inserted in the text directly after the data to which they refer – Abstracts and posters in meeting books must not be cited unless they are generally accessible
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