GUIDANCE NOTES FOR THE PREPARATION OF PAPERS FOR BIOTECHNOLOGY LETTERS

Authors should check the relevancy of their work for inclusion in *Biotechnology Letters* by reading the Aims and Scope that are printed in each issue of the journal and are also available from our website [http://www.springeronline.com/journal/10529](http://www.springeronline.com/journal/10529). To ensure relevancy, authors should check if citations of relevant papers previously published in this journal are included in their submitted paper.

We urge you to read these Notes very carefully. We need your paper to have the minimum number of errors so that it can be published immediately. The Editors cannot undertake extensive rewriting of poorly presented papers as their priority is for the rapid publication of high quality papers.

You will need to produce a perfect copy of your paper that is ready for printing from your electronic submission. Only the minimum amount of editing can be done on the final manuscript. Detailed Instructions to Authors are available on the website:


If your first language is not English, we would urge you to seek help from someone who is fluent in English. The use of professional paper writing agencies is strongly encouraged where authors may have major problems in writing their work clearly or concisely. It will also help if you consult a recent issue of the Journal to see our preferred style of writing and presentation of information. This is available online at: [http://www.springeronline.com/journal/10529](http://www.springeronline.com/journal/10529)

**Overall length** The maximum length of a published paper in the Journal is usually six (6) printed pages. Papers having over 12 typed pages of text are usually too long. Tables, Figures and the Reference List all count towards the final length of your paper.

Please ensure that all pages, including those for the reference list, tables and figures, are numbered. Lines on each page should also be numbered either sequentially throughout the entire paper or on each individual page. All material must be in double-spaced typing; this includes Tables and the presented data plus Figure legends. There are no exceptions.

**Supporting Information** Lengthy information that is not essential for the understanding of the paper can be given as Supplementary Tables and Figures. These are printed on-line but will not be printed in the Journal. Authors should consider using these for information such as DNA and protein sequences, including sequences of primers used for PCR, plasmids used, information regarding the identification of new microbial isolates, ancillary data about protocols or minor results. These will not be counted as part of the length of the final paper. This section is placed immediately before the list of references. Citation of the supplementary data must be given in the text as “Supplementary Table 1”, “Supplementary Figure 1” etc and not as “Table S1” or “Figure S1”.

**Section of the Journal** Please specify at the top of the title page the section to which your paper should be allocated – see Instructions to Authors.

**Title** This must be accurate and informative; please do not use phrases such as “The effect of...”, “Studies on...” etc. Specify the organism or cell system you have used. We do not publish papers that have a sequence number.

**Abstract** A structured Abstract is to be provided for research papers.

**Objectives** A single sentence of up to 35 words should indicate the scope and reasons for the word.

**Results** This must be both informative and concise. Do not use phrases such as “In this study...”, “We have carried out a study into... and the results are reported here”, “This paper describes .....” or “These experiments are evaluated here...”. Also do not use words such as “high”, “low”, “rapid”, “slow”, “increased” etc. but give the key quantitative results; what may be a “high” value to you may be a moderate one to someone else. **Such words have no scientific value.** All non-standard abbreviations must be defined. Do not include references unless essential and
then the reference must be given in full. The overall length should be no longer than 120 words and be given as a single paragraph.

**Conclusions**  a single sentence of up to 35 words to give the principal conclusion.
Abstracts for reviews can be given as a single paragraph not exceeding 150 words.

**Key words:** up to 7 words or phrases suitable for indexing should be given.

**Introduction**  Please keep this as short as possible (usually no more than 300-350 words); do not give a minireview of the literature; give key references to recent, relevant publications; historical references are rarely useful. Space is precious - keep it for your results.

**Methods**  Give concise information concerning the key protocols only. Avoid describing routine or trivial matters such as how the micro-organisms are maintained, how and when the cultures were sampled. The latter information is easily understood from the tables or figures. Suppliers of chemicals and manufacturers of equipment should only be given if these are not generally available or are in some way unusual or are crucial for success. Suppliers such as Sigma-Aldrich etc. are given without addresses. There is no need to give references to standard procedures, e.g. Lowry or Bradford methods etc. We encourage authors to place as much relevant information in the footnotes and legends of their tables and figures to increase understanding of these illustrations.

**Results**  Results, given in tables and figures, do not need to be described again at length in the text. This is a very common fault and leads to Results sections often being too long. Focus the reader’s attention on your key results. The Results and Discussion sections may be combined. An ideal Results section might simply say: “The results are given in Tables 1 and 2 and further details are shown in Figures 1 and 2.”

**Discussion**  Put your key results into the context of current information but do not repeat a description of the results. Also avoid unwarranted or unsupported speculations. Keep your discussion short and focused on explaining the significance of your results.

**Tables**  These should be given, together with their title, on a separate sheet for each table at the end of text and after the References. Their lay-out should be suitable for printing as either single column (7.5 cm) or double column (16 cm) width. Avoid vertical rulings (lines) and keep horizontal rulings to a minimum. Please ensure 100% relative values are given as absolute values in a footnote.

Do not quote values beyond the accuracy (or inaccuracy) of the methods being used. This is a very common fault. State clearly how many times each complete experiment was done and how many times each individual determination was done. Understanding the likely reproducibility of your measurements is of crucial concern. Data given in Tables and Figures should be understandable without recourse to the text: you can add key information regarding experimental procedures in footnotes and omit such details from the Methods section. It is essential that all non-standard abbreviations used in tables and figures are re-defined.

Indicate the approximate position of the Table by a note in the margin of the text or between paragraphs.

**Figures**  Make sure these will reproduce satisfactorily: lines, symbols and lettering must be clear, of equal blackness and are thick enough to be easily read when reproduced at a single column width (7.5 cm). Please do not use color when the figure can be easily printed in black and white. Please give adequate footnotes so that figures can be understood without recourse to the text. Please ensure 100% relative values of data are also given in absolute values in the legend. Please avoid giving figures with large areas of blank space.

Each figure should be given on a separate sheet with their number clearly stated. The captions (legends) should be grouped together and placed on another separate sheet that follows the Tables but precedes the Figures.

Please indicate the approximate position for the figure with a note given in the margin of the text or between paragraphs.
Photographs These must be high-contrast and be in black and white that will show the key details when printed. Colour photographs may be printed without charge if, in the opinion of the Editor, colour will enhance the illustration. Do not copy print-outs from recorders or computers attached to instruments - these are rarely of publishable quality. Do not scan-in material as it is impossible for such material to be processed later. Avoid making black and white copies from coloured photographs - these do not have sufficient contrast. For photomicrographs, scale bars must be added on the print itself and the size of the bar then given in the legend. Again, please ensure that the photographs are appropriate for printing at a single column width (7.5 cm) or exceptionally at double width. Please remove all extraneous material from the photograph or photomicrograph. Make sure that all that will be printed is essential and the photograph cannot be made smaller.

Gene sequences These are no longer published by the Journal and should be lodged in an appropriate database. The accession number of the sequence should be quoted in the manuscript. If parts of these sequences are relevant to the paper, then they may be given as Supporting information – see above.

References No more than 15 are usually necessary; if more, then you are probably over-reviewing the literature and please consider if the number can be decreased. Please use the correct style - see Notes to Authors. Please ensure the references in the text match the ones given in the list and vice versa.

Common errors all too frequently made.

Reproducibility of results The number of times a complete experiment has been carried out should be given together with the number of samples analysed on each occasion. This should be indicated either in the Methods or in the Tables or Figures. The range of values should be indicated by ± in a table, or by an error-bar in a figure.

Accuracy All values should be quoted within the experimental accuracy of the protocol being used taking into account the type of analysis and instrumentation being used. Rarely can values given to four or more significant figures be justified. Please avoid the use of non-significant zeros in numerical values (e.g. write 10 g glucose NOT 10.0 g glucose, or even 10.00 g glucose, etc.).

Please avoid using ‘reduce’ when you mean ‘decrease’ or ‘lower’ particularly in the context where there may be (bio)chemical reductions.

Units: please always leave a space between the number and the unit; e.g. 100 mM not 100mM.

Do not use a fold-decrease (e.g. a 5-fold decrease) as the meaning of this is never clear. Use % decrease instead.

Avoid ‘ppm’ and, where possible, ‘%’ but give as mg/l (mg l⁻¹) or g/l (g l⁻¹) etc. SI units and permitted alternatives are to be used. Use correct abbreviations for standard units: h not hr, g not gr etc. If you use % for a concentration, always state if this is v/v, w/v, v/w or w/w. Abbreviations are never made plural. Do not use normalities (N) for concentrations of acids or bases; molarities (M) should be given instead. Please note that the journal prefers the use of M (and mM etc.) rather than mol l⁻¹ or mmol l⁻¹.

Avoid redundant words or phrases such as ‘a blue colour’, ‘at a temperature of 30°C’, ‘at a wavelength of 340 nm’, ‘at a concentration of 2 g/l etc.’ (Blue is a colour and does not need stating!) Also phrases such as ‘It was observed that...’, ‘Previous published research has established that...’ or ‘It can be seen from Table 2 that...’ are also redundant and may, without exception, be deleted or decreased to ‘Table 2 shows that...’. Also words such as ‘successfully’ as in “The gene was successfully cloned...” and ‘recent’ as in “Recent research...” can also be deleted without affecting the clarity of the writing.

Concentrations are given as 10 g ethanol/l not 10 g/l ethanol. Mixtures of materials are given as Tris/HCl, chloroform/methanol (2:1, v/v) or methanol/water/acetic acid (60:35:5, by vol.).

For presentation of cell growth, please give as dry weight values for microbes, plant and animal cell cultures. Values as wet weights are not acceptable. Optical densities (not absorbancies) are given as OD values (e.g. OD₆₀₀) and must
be converted to the corresponding cell dry wt values. Please do not say “exponential (or logarithmic) growth” unless you have clear data to support that such rates were achieved. Arithmetic growth rates are usually attained in most cell growth systems in spite of many statements to the contrary.

Please use non-standard abbreviations sparingly: these confuse more often than not and are unlikely to save more than 1 or 2 lines of space in the whole paper. Only use if they are replacing lengthy phrases or chemical names.

June 2018