

Using This Template (Research Article – general)

The template consists of essential headings along with body text explaining what to include in each section. You should overwrite (or copy and paste) the body text with the corresponding section text for your article. Obviously, you should add other headings as needed.

Title (150 characters or fewer)

The title should be specific to the study yet concise, and should allow sensitive and specific electronic retrieval of the article. It should be comprehensible to readers outside your field. Avoid specialist abbreviations if possible. Present this in title case, capitalizing all words except for prepositions, articles, and conjunctions. Titles should also include relevant information about the design of the study, e.g.: Television watching and family dysfunction in medical journal editors: a case-control study.

Authors and Affiliations

Provide the first names or initials (if used), middle names or initials (if used), surnames, and affiliations—department, university or organization, city, state/province (if applicable), and country—for all authors. One of the authors should be designated as the corresponding author. If the article has been submitted on behalf of a consortium, all author names and affiliations should be listed at the end of the article.

Abstract

The abstract succinctly introduces the paper. We advise that it should not exceed 250–300 words. The abstract is conceptually divided into three sections. Background: include here a statement of the main research question. Methodology/Principal Findings. include here the techniques used without going into methodological detail, together with a summary of the most important findings with key numerical results given, with measures of error and not just p values. Conclusions/Significance: concisely summarize the study's implications. Please do not include any citations in the abstract. Avoid specialist abbreviations if possible.

Introduction

The introduction should put the focus of the manuscript into a broader context. As you compose the introduction, think of readers who are not experts in this field. Include a brief review of the key literature. If there are relevant controversies or disagreements in the field, they should be mentioned so that a non-expert reader can delve into these issues further. The introduction should conclude with a brief statement of the overall aim of the experiments and a comment about whether that aim was achieved.

Results

The results section should provide details of all of the experiments that are required to support the conclusions of the paper. There is no specific word limit for this section. The section may be divided into subsections, each with a concise subheading. Large datasets, including raw data, should be submitted as supporting information files; these are published online alongside the accepted article. We advise that the results section be written in past tense.

Discussion

The discussion should spell out the major conclusions of the work along with some explanation or speculation on the significance of these conclusions. How do the conclusions affect the existing assumptions and models in the field? How can future research build on these observations? What are the key experiments that must be done? The discussion should be concise and tightly argued. Conclusions firmly established by the presented data, hypotheses supported by the presented data, and speculations suggested by the presented data should be clearly identified as such. The results and discussion may be combined into one section, if desired.

Materials and Methods

This section should provide enough detail to allow full replication of the study by suitably skilled investigators. Protocols for new methods should be included, but well-established protocols may simply be referenced. We encourage authors to submit, as separate supporting information files, detailed protocols for newer or less well-established methods. These are published online only, but are linked to the article and are fully searchable.

Acknowledgments

People who contributed to the work but do not fit criteria for authorship should be listed in the Acknowledgments, along with their contributions. It is the authors' responsibility to ensure that anyone named in the acknowledgments agrees to being so named. Details of the funding sources that have supported the work should be confined to the funding declaration provided on submission. Do not include them in the acknowledgments.

References

Only published or accepted manuscripts should be included in the reference list. Meetings abstracts, conference talks, or papers that have been submitted but not yet accepted should not be cited. Limited citation of unpublished work should be included in the body of the text only. All personal communications should be supported by a letter from the relevant authors.

PLoS uses the numbered citation (citation-sequence) method. References are listed and numbered in the order that they appear in the text. In the text, citations should be indicated by the reference number in brackets. Multiple citations within a single set of brackets should be separated by commas. Where there are more than three sequential citations, they should be given as a range. Example: "... has been shown previously [1,4-6,22]." Make sure the parts of the manuscript are in the correct order before ordering the citations.

Because all references will be linked electronically as much as possible to the papers they cite, proper formatting of the references is crucial. Please use the following style for the reference list:

Published papers

Sanger F, Nicklen S, Coulson AR (1977) DNA sequencing with chain-terminating inhibitors. *Proc Natl Acad Sci U S A* 74: 5463–5467.

Please list the first five authors and then add "et al." if there are additional authors. Use of a DOI number to the full-text article is acceptable as an alternative to or in addition to traditional volume and page numbers.

Accepted papers

Same as above, but "In press" appears instead of the page numbers. Example: *Adv Clin Path.* In press.

Electronic journal articles

Loker WM (1996) "Campesinos" and the crisis of modernization in Latin America. *Jour Pol Ecol* 3. Available: http://www.library.arizona.edu/ej/jpe/volume_3/ascii-lokeriso.txt via the Internet. Accessed 11 Aug 1996.

Books

Bates B (1992) *Bargaining for life: A social history of tuberculosis*. Philadelphia: University of Pennsylvania Press. 435 p.

Book chapters

Hansen B (1991) New York City epidemics and history for the public. In: Harden VA, Risse GB, editors. *AIDS and the historian*. Bethesda: National Institute of Health. pp. 21–28.

Figure Legends

The aim of the figure legend should be to describe the key messages of the figure, but the figure should also be discussed in the text. An enlarged version of the figure and its full legend will often be viewed in a separate window online, and it should be possible for a reader to understand the figure without switching back and forth between this window and the relevant parts of the text. Each legend should have a concise title of no more than 15 words. The legend itself should be succinct, while still explaining all symbols and abbreviations. Avoid lengthy descriptions of methods.

Tables

The table title should be concise, no more than one sentence. The rest of the table legend and any footnotes should be placed below the table. Footnotes can be used to explain abbreviations.

Tables must be cell-based, such as would be produced in a spreadsheet program or in Microsoft Word. Do not provide tables as graphic objects. Tables must be no larger than one printed page (7inches x 9.5inches). Larger tables can be published as online supporting information. Bold and italics formatting will be preserved in the published version; however, more extensive formatting will be lost. Do not include color, shading, lines, rules, text boxes, tabs, returns, or pictures within the table.