

PLOS template

Name1 Surname^{1,2}[✉], Name2 Surname²[✉], Name3 Surname^{2,3}, Name4 Surname², Name5 Surname^{2†}, Name6 Surname², Name7 Surname^{1,2,3*}, with the Lorem Ipsum Consortium[¶]

- 1 Affiliation Dept, Institution Name, City, State, Country,
- 2 Affiliation Center, Institution Name, City, State, Country,
- 3 Affiliation Program, Institution Name, City, State, Country,

✉These authors contributed equally to this work.

✉Current Address: Dept/Program/Center, Institution Name, City, State, Country

†Deceased

¶Membership list can be found in the Acknowledgments sections

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Abstract

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Author summary

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General guidelines for this Quarto template

This template shows how to use PLOS template from <https://plos.org/resources/writing-center/>. Each journal have a submission guideline page, please refer to it.

- PLOS Biology
- PLOS Climate
- PLOS Digital Health

- PLOS Computational Biology 8
- PLOS Genetics 9
- PLOS Global Public Health 10
- PLOS Medicine 11
- PLOS Neglected Tropical Diseases 12
- PLOS ONE 13
- PLOS Pathogens 14
- PLOS Sustainability and Transformation 15
- PLOS Water 16

This template file contains some guidelines and recommendation initially given in `plos_latex_template.tex` that can be found in https://github.com/quarto-journals/plos/blob/main/style-guide/plos_latex_template.tex

Metadata 20

About journal id field 21

This is an identifier for the target journal. It can be derived from [https://plos.org/resources/writing-center/ following submission guidelines link](https://plos.org/resources/writing-center/following-submission-guidelines-link), the identifier is the part of the URL after `https://journals.plos.org/<id>/s/submission-guidelines`

Journal	id
PLOS Biology	plosbiology
PLOS Climate	climate
PLOS Digital Health	digitalhealth
PLOS Computational Biology	ploscompbiol
PLOS Genetics	plosgenetics
PLOS Global Public Health	globalpublichealth
PLOS Medicine	plosmedicine
PLOS Neglected Tropical Diseases	plosntds
PLOS ONE	plosone
PLOS Pathogens	plospathogens
PLOS Sustainability and Transformation	sustainabilitytransformation
PLOS Water	water

Example :

```
format:
  plos-pdf:
    journal:
      id: water
```

Once your paper is accepted for publication, 27

Do not include track change in LaTeX file and leave only the final text of your manuscript. PLOS recommends the use of latexdiff to track changes during review, as this will help to maintain a clean tex file. Visit <https://www.ctan.org/pkg/latexdiff?lang=en> for info or contact us at latex@plos.org.

This should not be a problem using Quarto but still a recommendation from the journal

There are no restrictions on package use within the LaTeX files except that no packages listed in the template may be deleted.

Please do not include colors or graphics in the text. Color can be used to apply background shading to table cells only.

The manuscript LaTeX source should be contained within a single file (do not use `\input`, `\externaldocument`, or similar commands).

Please contact latex@plos.org with any questions submission guidelines. For anything Quarto related, please open an issue in <https://github.com/quarto-journals/plos>. If this is related to the LaTeX template, this could also be a good idea to contact PLOS directly.

Figures and Tables

Please include tables/figure captions directly after the paragraph where they are first cited in the text.

Figures

However, do not include graphics in your manuscript

- Figures should be uploaded separately from your manuscript file.
- Figures generated using LaTeX should be extracted and removed from the PDF before submission.
- Figures containing multiple panels/subfigures must be combined into one image file before submission.

This means that, depending on how you create your figure, a manual post processing will be required.

For figure citations, please use “Fig” instead of “Figure”. This has been made the default in this Quarto format:

```
crossref:  
fig-title: Fig
```

Also, place figure captions after the first paragraph in which they are cited.

See PLOS figure guidelines at <https://journals.plos.org/plosone/s/figures> and in your specific journal guideline.

Tables

Tables should be cell-based and may not contain:

- spacing/line breaks within cells to alter layout or alignment
- do not nest tabular environments (no tabular environments within tabular environments)
- no graphics or colored text (cell background color/shading OK)

See PLOS table guidelines at <http://journals.plos.org/plosone/s/tables> and in your specific journal guideline.

For tables that exceed the width of the text column, use the `adjustwidth` environment as illustrated in the example table in text below. If you are in this case, you’ll either need to manually post process the `.tex` file and recreate the PDF, or you need to include LaTeX tables directly.

Also, place tables after the first paragraph in which they are cited.

Equations, math symbols, subscripts, and superscripts

Below are a few tips to help format your equations and other special characters according to our specifications. For more tips to help reduce the possibility of formatting errors during conversion, please see our LaTeX guidelines at <http://journals.plos.org/plosone/s/latex>

- For inline equations, please be sure to include all portions of an equation in the math environment. For example, x^2 is incorrect; this should be formatted as x^2 (or x^2 if the romanized font is desired).
- Do not include text that is not math in the math environment. For example, CO_2 should be written as CO_2 giving CO_2 instead of CO_2 .
- Please add line breaks to long display equations when possible in order to fit size of the column.
- For inline equations, please do not include punctuation (commas, etc) within the math environment unless this is part of the equation.
- When adding superscript or subscripts outside of brackets/braces, please group using $\{ \}$. For example, change $[U(D,E,\gamma)]^2$ to $\{[U(D,E,\gamma)]\}^2$.
- Do not use cal for caligraphic font. Instead, use $\text{mathcal}\{ \}$

Title and headings

Please use “sentence case” for title and headings (capitalize only the first word in a title (or heading), the first word in a subtitle (or subheading), and any proper nouns).

PLOS does not support heading levels beyond the 3rd, meaning no 4th level headings. Header 4 levels ##### is used for the *Supporting information* section

Abstract and author summary

Abstract must be kept below 300 words.

Author Summary must be kept between 150 and 200 words and first person must be used.

For PLOS ONE, author summary won't be included as it is not valid for submission.

Supplementary information syntax

Use this markdown syntax to create the supplementary information block with a custom block of class `.supp`

```
::: {.supp}
## SI TYPE {#id}
```

First paragraph is a title sentence that will be bold. (required)

Optionnaly, add descriptive text after the title of the item. No third paragraph is allowed

```
:::
```

They need to be referenced in text using `\nameref` by using this syntax
`[id](.nameref)` where `id` will be the id used on the header.

References

Within Quarto, `\natbib` will be used with `plos2015.bst`, which expect numeric style citation. Use brackets for references, e.g `[@ref]`.

Quarto features limitation

Some features are not working with this format in PDF:

- Callouts
- Code highlighting customization (border left, background color)

Following content of this document is from the LaTeX template content to demo journal style.

Introduction

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Materials and methods

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Figure 1. Bold the figure title. Figure caption text here, please use this space for the figure panel descriptions instead of using subfigure commands. A: Lorem ipsum dolor sit amet. B: Consectetur adipiscing elit.

Results

Results and Discussion can be combined.

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Table 2. Table caption Nulla mi mi, venenatis sed ipsum varius, volutpat euismod diam.

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3rd level heading

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Discussion

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Conclusion

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information, see S1 Appendix.

Supporting information

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S2 Fig. Lorem ipsum. Maecenas convallis mauris sit amet sem ultrices gravida.
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Acknowledgments

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References

1. Wolfe KH, Conant GC. Turning a hobby into a job: How duplicated genes find new functions. *Nature reviews Genetics*. 2008;9(12):938–950.
2. Ohno S. *Evolution by Gene Duplication*. Springer-Verlag; 1970. Available from: <https://books.google.fr/books?id=sxUDAAAAMAAJ>.
3. Magwire MM, Bayer F, Webster CL, Cao C, Jiggins FM. Successive Increases in the Resistance of *Drosophila* to Viral Infection through a Transposon Insertion Followed by a Duplication. *PLOS Genetics*. 2011;7(10):1–11. doi:10.1371/journal.pgen.1002337.