

# Author guidelines

## General standards

## Article type

Frontiers requires authors to select the appropriate article type for their manuscript and to comply with the article type descriptions defined in the journal's 'Article types' page, which can be found under the 'About journal' menu in 'For authors' on every Frontiers journal page. Please pay close attention to the word count limits.

### Author Guid...

### General standa...

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### Supplementary...

### References

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## Manuscript length

We encourage you to closely follow the article word count lengths given in the 'Article types' page of the journals. The manuscript length includes only the main body of the text, footnotes, and all citations within it, and excludes the abstract, section titles, figure and table captions, funding statement, acknowledgments, and references in the bibliography. Please indicate the number of words and the number of figures and tables included in your manuscript on the first page.

## Language editing

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### The Charlesworth Group

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There are a few simple ways to maximize your article's discoverability and search results.

- Include a few of your article's keywords in the title of the article
- Do not use long article titles
- Pick 5-8 keywords using a mix of generic and more specific terms on the article subject(s)
- Use the maximum amount of keywords in the first two sentences of the abstract
- Use some of the keywords in level 1 headings

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manuscript. Abbreviations should be avoided within the title.

Witty or creative titles are welcome, but only if relevant and within measure. Consider if a title meant to be thought-provoking might be misinterpreted as offensive or alarming. In extreme cases, the editorial office may veto a title and propose an alternative.

Authors should avoid:

- titles that are a mere question without giving the answer
- unambitious titles, for example starting with 'Towards,' 'A description of,' 'A characterization of' or 'Preliminary study on'
- vague titles, for example starting with 'Role of,' 'Link between', or 'Effect of' that do not specify the role, link, or effect
- including terms that are out of place, for example the taxonomic affiliation apart from species name.

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indexed in official archives. Affiliations should be keyed to the author's name with superscript numbers and be listed as follows:

- Laboratory, Institute, Department, Organization, City, State abbreviation (only for United States, Canada, and Australia), and Country (without detailed address information such as city zip codes or street names).

Example: Max Maximus<sup>1</sup>

<sup>1</sup> Department of Excellence, International University of Science, New York, NY, United States.

## Correspondence

The corresponding author(s) should be marked with an asterisk in the author list. Provide the exact contact email address of the corresponding author(s) in a separate section.

Example: Max Maximus\*

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Example: Max Maximus 1†, John Smith2† and Barbara Smith1

†These authors contributed equally to this work and share first authorship

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in a separate section at the end of the article.

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Example: John Smith, Barbara Smith and The Collaborative Working Group.

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Example: John Smith and Barbara Smith

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## Abstract

As a primary goal, the abstract should make the general significance and conceptual advance of the work clearly accessible to a broad readership. The abstract should be no longer than a single paragraph and should be structured, for example, according to the [IMRAD format](#). For the specific structure of the abstract, authors should follow the requirements of the article type or journal to which they're submitting. Minimize the use of abbreviations and do not cite references, figures or tables.

For clinical trial articles, please include the unique identifier and the URL of the publicly-accessible website on which the trial is registered.

## Keywords

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The use of abbreviations should be kept to a minimum. Non-standard abbreviations should be avoided unless they appear at least four times, and must be defined upon first use in the main text. Consider also giving a list of non-standard abbreviations at the end, immediately before the acknowledgments.

Equations should be inserted in editable format from the equation editor.

Italicize gene symbols and use the approved gene nomenclature where it is available. For human genes, please refer to the HUGO Gene Nomenclature Committee ([HGNC](#)). New symbols for human genes should be submitted to the HGNC [here](#). Common alternative gene aliases may also be reported, but should not be used alone in place of the HGNC symbol. Nomenclature committees for other species are listed [here](#). Protein products are not italicized.

We encourage the use of Standard International Units in all manuscripts.

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The manuscript is organized by headings  
and subheadings. The section headings  
should be those appropriate for your field  
and the research itself. You may insert up  
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(i.e.,: 3.2.2.1.2 Heading Title).

For Original Research articles, it is  
recommended to organize your  
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### Introduction

Succinct, with no subheadings.

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text.

### Discussion

This section may be divided by subheadings. Discussions should cover the key findings of the study: discuss any prior research related to the subject to place the novelty of the discovery in the appropriate context, discuss the potential shortcomings and limitations on their interpretations, discuss their integration into the current understanding of the problem and how this advances the current views, speculate on the future direction of the research, and freely postulate theories that could be tested in the future.

For further information, please check the descriptions defined in the journal's 'Article types' page, in the 'For authors' menu on every journal page.

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requested by third-party rights holders, and cover any supplementary charges.

For additional information, please see the 'Image manipulation' section of our [policies and publication ethics](#).

## Figure requirements and style guidelines

Frontiers requires figures to be submitted individually, in the same order as they are referred to in the manuscript; the figures will then be automatically embedded at the end of the submitted manuscript. Kindly ensure that each figure is mentioned in the text and in numerical order.

For figures with more than one panel, panels should be clearly indicated using labels (A), (B), (C), (D), etc. However, do not embed the part labels over any part of

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Please note that figures not in accordance with the guidelines will cause substantial delay during the production process.

## Captions

Captions should be preceded by the appropriate label, for example 'Figure 1.' Figure captions should be placed at the end of the manuscript. Figure panels are referred to by bold capital letters in brackets: (A), (B), (C), (D), etc.

## Image size and resolution requirements

Figures should be prepared with the PDF layout in mind. Individual figures should not be longer than one page and with a width that corresponds to 1 column (85 mm) or 2 columns (180 mm).

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one option is to export the file as PDF, then convert into TIFF or EPS using a graphics software.

## Format and color image mode

The following formats are accepted: TIF/TIFF (.tif/.tiff), JPEG (.jpg), and EPS (.eps) (upon acceptance). Images must be submitted in the color mode RGB.

## Chemical structures

Chemical structures should be prepared using ChemDraw or a similar program. If working with ChemDraw please use our [ChemDraw template](#). If working with another program please follow the guidelines below.

- Drawing settings: chain angle, 120° bond spacing, 18% width; fixed length,

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Word. If you use a LaTeX processor, build your table in LaTeX. An empty line should be left before and after the table.

Table captions must be placed immediately before the table. Captions should be preceded by the appropriate label, for example 'Table 1.' Please use only a single paragraph for the caption.

Ensure that each table is mentioned in the text and in numerical order.

Large tables covering several pages cannot be included in the final PDF for formatting reasons. These tables will be published as supplementary material.

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## Accessibility

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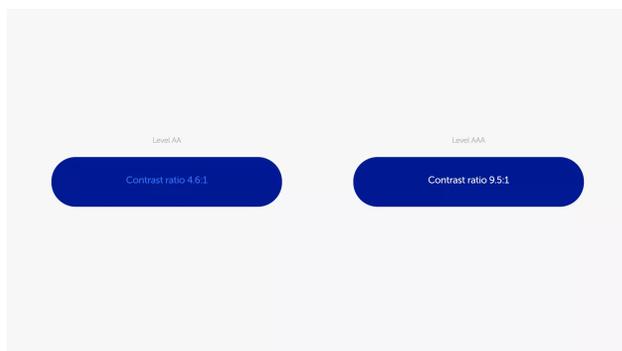
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contrast.

WC3 recommends the following contrast ratio levels:

- Level AA, contrast ratio of at least 4.5:1
- Level AAA, contrast ratio of at least 7:1



You can verify the contrast ratio of your palette with these online ratio checkers:

- [WebAIM](#)
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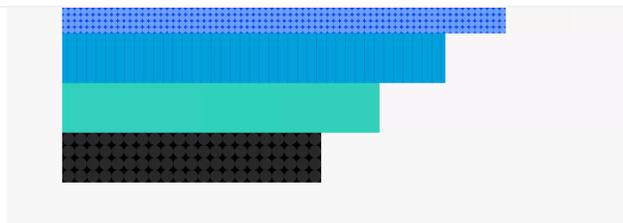
**Avoid using red or green indicators**

More than 99% of color-blind people have a red-green color vision deficiency.

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## Supplementary material

Data that are not of primary importance to the text, or which cannot be included in the article because they are too large or the current format does not permit it (such as videos, raw data traces, and PowerPoint presentations), can be uploaded as supplementary material during the submission procedure and will be displayed along with the published article. All supplementary files are deposited to figshare for permanent

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- audio (MP3, WAV or WMA)
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Technical requirements for supplementary images:

- 300 DPIs
- RGB color mode.

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## References

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found below, for more examples of citing other documents and general questions regarding the Harvard reference style, please refer to the [Chicago Manual of Style](#).

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- For works by two authors, include both surnames, followed by the year
- For works by more than two authors, include only the surname of the first author followed by et al., followed by the year
- For humanities and social sciences articles, include the page numbers.

## Reference list examples

### Article in a print journal

Sondheimer, N., and Lindquist, S. (2000).

*Prg1: an epigenetic modifier of protein*

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York: Oxford University Press.

### Abstract

Hendricks, J., Applebaum, R., and Kunkel, S. (2010). A world apart? Bridging the gap between theory and applied social gerontology. *Gerontologist* 50, 284-293. Abstract retrieved from Abstracts in Social Gerontology database. (Accession No. 50360869)

### Website

World Health Organization. (2018). E. coli. <https://www.who.int/news-room/fact-sheets/detail/e-coli> [Accessed March 15, 2018].

### Patent

Marshall, S. P. (2000). Method and apparatus for eye tracking and monitoring pupil dilation to evaluate cognitive activity. U.S. Patent No 6,090,051. Washington, DC: U.S. Patent and Trademark Office.

### Data

Perdiguero P, Venturas M, Cervera MT, Gil L, Collada C. Data from: Massive

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**Article or chapter in a book**

Sorenson PW, Caprio JC.

"Chemoreception". In: Evans DH, editor. The Physiology of Fishes. Boca Raton, FL: CRC Press (1998). p. 375-405.

**Book**

Cowan WM, Jessell TM, Zipursky SL. Molecular and Cellular Approaches to Neural Development. New York: Oxford University Press (1997). 345 p.

**Abstract**

Christensen S, Oppacher F. An analysis of Koza's computational effort statistic for genetic programming. In: Foster JA, editor. Genetic Programming. EuroGP 2002: Proceedings of the 5th European Conference on Genetic Programming; 2002 Apr 3-5; Kinsdale, Ireland. Berlin: Springer (2002). p. 182-91.

**Website**

World Health Organization. E. coli (2018). <https://www.who.int/news-room/fact-sheets/detail/e-coli> [Accessed March 15, 2018].

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## Theses and dissertations

Smith, J. (2008) Post-structuralist discourse relative to phenomenological pursuits in the deconstructivist arena. [dissertation/master's thesis]. [Chicago (IL)]: University of Chicago

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