



nature publishing group

Authors' Style checklist for Nature Research Journals

ENSURING ACCURACY

Avoid the most common errors

- Check that the author list is complete and correctly ordered.
- Check that all coauthors' names are spelled correctly.
- Check affiliations, especially those of collaborators from other institutions, and check order of affiliations.
- Check that all references are cited and all reference citations correspond accurately to the reference list provided.
- Check Acknowledgments, including completeness of the list of individuals acknowledged, and accuracy and completeness of grant numbers and funding sources.
- Check accession codes by searching for them in the relevant database.
- Check that images are not inadvertently repeated. Look carefully at images.
- Check supplementary materials thoroughly; we do not edit these documents, and minor (nonfactual) errors cannot be corrected after publication.

Image integrity

- Please confirm that the paper complies with Nature Publishing Group policy concerning image integrity (see http://www.nature.com/authors/editorial_policies/image.html).

Additional editorial policies

- For requirements regarding disclosure of information such as gene sequences, protein structure coordinates, ethical oversight committees, competing financial interests, *etc.*, please consult our editorial policies online at http://www.nature.com/authors/editorial_policies/index.html.

STYLE BY SECTION

Title

- Should be succinct and have no punctuation.
- Capitalize only the first letter.

AUTHOR NAMES AND AFFILIATIONS

- List full first and last names of all authors.
- Denote affiliations and other author information with superscript numbers (not symbols). Correct order: individual affiliations (in the same order as the author list); footnote pointing to full list of consortium authors; present addresses; "Deceased."; "These authors contributed equally to this work." (only one 'equal contributions' statement is allowed).
- End affiliations by stating corresponding author(s), *without* a footnote: "Correspondence should be addressed to X.Y.Z. (xyz@institution.edu)." List no more than two e-mail addresses for correspondence.

- Affiliations should include full mailing address information, including postal codes; please do not use abbreviations.

ABSTRACT

Must contain the following information:

1. Background (context)
2. Aim (the problem)
3. Method (and organism, if not stated in title)
4. Non-technical summary of main findings ("Here we show...")
5. Implications of findings (so what?)
 - Do not exceed 150–200 words (70 for Brief Communications).
 - Do not include reference citations in abstract. (Exception: initial summary paragraph of a Letter should be referenced.)

HEADINGS AND SUBHEADINGS

- All Articles and Technical Reports (but not other article types) should include standard 'Results', 'Discussion' and 'Methods' headings.
- Include subheads in Results and Methods sections to help guide the reader.
- Subheads in Results should not exceed one line in print (~59 characters, including white spaces).
- Subheads in Methods should be run in with text ("Subheading. XXXX...")

METHODS

- Restrict descriptions of methods to this section, rather than writing long figure or table legends.
- Include manufacturer names, but not locations.
- For software, cite reference, indicate manufacturer or provide URL of website for download.
- See GENERAL STYLE AND USAGE below for other relevant styles.

ACCESSION CODES

- List newly generated accession codes for GenBank, Protein Data Bank, *etc.* in a separate Methods section, at end of Methods. This generates links to online databases.

ACKNOWLEDGMENTS

- Refer to individuals by first initial and last name, without titles or affiliations (*e.g.*, J. Bloggs, not Dr. Joe Bloggs).
- Exception: indicate affiliations of researchers who provided materials.
- Grant numbers are allowed; spell out name of granting institution (avoid acronyms).

REFERENCE LIST

- See journal-specific style requirements for length limits.
- Number refs. in order of citation. Be sure to renumber if you have made any edits that affect reference order.
- Do *not* include the following in the reference list: personal communication, submitted for publication, in preparation, meeting abstract. Observations from these sources should be cited parenthetically in text as “unpublished data” or, if not from the present authors, “personal communication.” List all authors of unpublished results, and provide written permission for personal communications (email is fine).
- Websites for software download should also be cited parenthetically in text, not in reference list.
- Our bibliographic style is as follows:
 1. Smith, M.A. & Jones, P. Kinase structures. *Biochemistry* **90**, 243–245 (1992).
 2. Hung, D.L. *et al.* *NMR of Proteins* (Wiley, New York, 1997).
 3. French, M.L. Intercellular signaling and homeostasis. in *Adhesion of Proteins* (ed. Josephson, P.M.) 44–55 (Academic Press, San Diego, 1980).
 - o When there are six or more authors (and not when fewer), list first author followed by *et al.*
 - o Include article and chapter titles in citation lists for Articles, Technical Reports, Reviews and Perspectives, but omit them for Brief Communications. Capitalize only the first word of each article title, unless otherwise necessary.
 - o Make sure all journal abbreviations are correct, per PubMed.

FIGURE AND TABLE TITLES

- Each table, and the legend of each figure, should be preceded by a brief general title. For optimal web presentation, this must not refer to panel letters or other subparts. Samples: **Figure 2** The FAD-binding site. (a) The electron density...; **Table 2** Structural statistics for the BST molecule

FIGURE LEGENDS

- Each figure legend should be as concise as possible, <250 words. Describe only what is in the figure itself. Please restrict interpretations of data to the main text and methodological details (preparation steps, concentrations and other specific conditions in reactions or purifications) to the Methods.
- Use this general format: **Figure 2** The FAD-binding site. (a) The electron density...; (b) ... atom coloring is as in a.
- For each panel in each figure, indicate number of data sets represented (*n*), including relevant details of sample sources—e.g., “five samples each from three mice.” Define error bars and \pm terms as s.d. or s.e.m. This information can be grouped at end of legend to reduce word count. Example: “Data in a–c are means from three independent experiments; error bars show s.d.”
- To define shadings or symbols in graphs: first preference, key within image; second preference, symbols in legend (limited to black, dark gray, light gray and white, and circles, triangles, diamonds and other basic shapes); third preference, word descriptions (“black,” “dotted line”) in legend.

ELECTRONIC FORMATTING OF TABLES

- Tables should *not* be represented as text or embedded images. Rather, create using Table menu in Word or paste in from a spreadsheet program. Place tables at end of Word document.

TABLE FOOTNOTES

- Place explanatory material in footnotes, denoted by superscript lowercase letters.
- As for figures, define \pm errors as s.d. or s.e.m. and state number of data sets represented.

FIGURE IMAGES

- Avoid any backgrounds or boxes in figures
- Do not overlay panel letters on photographs.
- Use a *sans serif* type (Helvetica or Arial preferred) for labels.
- Capitalize first letter (only) of each label, except for items normally lower case (mRNA) or capital (abbreviations, *etc.*).
- Do not use boldface, italic or all-capital labels for emphasis.
- Include scale bars in photomicrographs, *etc.*, and include molecular mass markers or size markings in gel and blot photographs.
- In graphs, remove top and right borders, grid lines and gray backgrounds.
- In all graphs, both axes must be labeled with what is measured (and units in parentheses).
- When filling bars in bar graphs, use (in order of preference) black, light gray, dark gray and white. Use color only if there are more than four conditions. Do not use patterns such as hatching, dots or stripes.
- Red vs. green contrasts may not be visible to colorblind readers. Please recolor red-and-green models, graphs and schematics where colors are chosen arbitrarily. Re-coloring primary data, such as fluorescence images, to make them viewable by colorblind readers (see <http://www.vischeck.com/daltonize/>) is optional but encouraged.
- Tables are not permitted as part of figures; each should be a separate display item.

SUPPLEMENTARY MATERIAL

- Note that we do *not* copy edit or otherwise change supplementary information, and minor (nonfactual) errors in these documents cannot be corrected after publication. Please submit document(s) exactly as you want them to appear, with all images, legends and references in the desired order, and check carefully for errors.
- Cite all supplementary items in main text, using styles like (Supplementary Fig. 1)—not S1—(Supplementary Table 1), (Supplementary Methods), and cite in order.
- List article title and author names at the top of the first piece of supplementary information.

OVERALL STYLE

Abbreviations

- Please define every abbreviation at first use. If an abbreviation is defined in the abstract, it need not be redefined.

Gene and protein nomenclature

- Please be careful to clearly distinguish between protein and gene in referring to symbols or names.
- We strongly prefer the use of official gene and protein symbols, as defined in species genome databases (HUGO, MGI, FlyBase, SGD, *etc.*). Official gene symbols must be used at first mention of any gene, and certain journals require that these official gene symbols be used throughout (*Nature Genetics* and *Nature Biotechnology*).
- Formatting: gene symbols should be in italic type, protein symbols in roman (not italic); mRNA symbols should usually be italic.

Citing references in text

- Number refs. in order of citation, with those in figure legends and tables following those in the main text. Reference number should be superscripted (“as described⁸”). If citation follows a number, cite as (ref. 44) or (refs. 55–60) — e.g., “... in BRCA1 (ref. 7).”
- Avoid mentioning other authors by name in research papers; use citation numbers only.

Citing figures and tables in text

- All figures and tables must be cited in numerical order, and panels within figures cited in alphabetical order.
- References to figures and tables should be parenthetical whenever possible. Do NOT use constructions such as “Figure 1 shows that...” or “...as shown in Figure 1.”
- Use this style: (Fig. 1a), (Figs. 2 and 3), (Fig. 2a,b), (Fig. 2a–d), (Fig. 1 and Table 1), (Fig. 2 and Supplementary Fig. 1 online). If a non-parenthetical reference to a figure must be made, use this style: Figure 1.

Equations

- Do not imbed equations as pictures.
- Only equations that will be set apart from the text may be in an Equation Editor format; those embedded in the text must be in Word format (use Symbol font).
- Italicize all variables.

General style and usage (for both text and figure labels)

- Use American English spelling.
- When referring to data, use the term ‘significant’ only when referring to statistical significance; otherwise use a synonym such as ‘appreciable’, ‘substantial’ or ‘marked’.
- Use the active, not passive, voice throughout the main body of the text and in the Methods section. For example, (a) is preferable to (b) in the following example:
 - (a) We obtained aliquots of 5–30 ml of peripheral blood from each family member.
 - (b) 5–30 ml of peripheral blood were obtained from each family member.
- Do not use the term ‘anti-X antibody’. Instead, use ‘antibody to X’ or ‘X-specific antibody’.
- Use three-letter symbols when referring to a single amino acid residue (e.g., Arg191); but use the one-letter code for peptides of six or more residues and for mutants (e.g., a D96A substitution). In running text without reference to position, spell out the residue name (e.g., the lysine in the chain...).

- Use SI system to abbreviate units (in particular: s, seconds; min, minutes; h, hours; Da, daltons). Define aa, nt, bp and kb at first mention.
- Include a space between numbers and their associated units (except %).
- In units, use ⁻¹ instead of / (e.g., 44.4 g mol⁻¹, not 44.4 g/mol).
- Include commas in numbers longer than three digits (e.g., 1,200 nucleotides long), except for position numbers (Ala1096), accession numbers and other numbers used to name rather than count items.
- Define all % concentrations as “(vol/vol)” or “(wt/vol).”
- State centrifugation force as multiples of g, not r.p.m. (e.g., 2,500g).
- Indicate the relevant database for each accession code, and ensure that all accession codes generated by other researchers are clearly attributed.
- Use ‘en dashes’ for numerical ranges (e.g., 40–50 µl) and for minus signs (e.g., –80 °C), both in text and in figure labels. To insert an en dash using a PC keyboard, press Ctrl + minus sign (in number part of keyboard). On Mac keyboard, press Option + hyphen key.
- To ensure that symbols are not lost during typesetting, make sure all Greek letters (α, β, γ, μ) and mathematical symbols (°, × (for scientific notation and magnification), ±, ‘) are in Symbol font. If using Microsoft Word, choose Insert > Symbol. Note that the ± and ≥ signs are found in the Symbol font and are not simply + and > underlined.

JOURNAL-SPECIFIC REQUIREMENTS

Length limits, reference limits and display item limits vary from journal to journal, as do detailed house style rules. For specific requirements, please consult the Guide to Authors for the journal to which you are submitting:

| | |
|--|---|
| <i>Nature Biotechnology</i> | http://www.nature.com/nbt/authors/index.html |
| <i>Nature Cell Biology</i> | http://www.nature.com/ncb/authors/index.html |
| <i>Nature Chemical Biology</i> | http://www.nature.com/nchembio/authors/index.html |
| <i>Nature Genetics</i> | http://www.nature.com/ng/authors/index.html |
| <i>Nature Immunology</i> | http://www.nature.com/ni/authors/index.html |
| <i>Nature Materials</i> | http://www.nature.com/nmat/authors/index.html |
| <i>Nature Medicine</i> | http://www.nature.com/nm/authors/index.html |
| <i>Nature Methods</i> | http://www.nature.com/nmeth/authors/index.html |
| <i>Nature Neuroscience</i> | http://www.nature.com/neuro/authors/index.html |
| <i>Nature Physics</i> | http://www.nature.com/nphys/authors/index.html |
| <i>Nature Structural & Molecular Biology</i> | http://www.nature.com/nsmb/authors/index.html |