

# PNAS Information for Authors

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## PURPOSE AND SCOPE

The Proceedings of the National Academy of Sciences USA (PNAS) publishes research reports, commentaries, perspectives, and colloquium papers. In accordance with the guiding principles established by George Ellery Hale in 1914, PNAS publishes brief first announcements of Academy members' and foreign associates' (hereafter referred to as members) more important contributions to research and of work that appears to a member to be of particular importance. PNAS is a general science journal with a broad scientific audience. All papers should be intelligible to this audience.

**Research Reports** describe the results of original research of exceptional importance.

**Commentaries** call attention to papers of particular note and are written at the invitation of the Editorial Board.

**Perspectives** present a viewpoint on an important area of research and are written at the invitation of the Editorial Board.

**Colloquium Papers** are reports of scientific colloquia held under Academy auspices.

## EDITORIAL POLICIES

### Submission and Review

Manuscripts may be submitted to PNAS through any of the following three tracks:

**Track I.** An Academy member may "communicate" manuscripts for others that are within the member's area of expertise. Prior to submission to PNAS, the member obtains outside reviews of the paper from at least two qualified referees, each from a different institution and not from the authors' institutions. The names and contact information, including e-mails, of referees who reviewed the paper, along with the reviews and the authors' response, must be included. Reviews must be submitted on the PNAS review form. The communicating member should include a brief statement endorsing publication in PNAS.

**Track II.** Authors (members and nonmembers) may submit their manuscripts directly to the PNAS office. In a cover letter or in the online submission form, authors must recommend up to 3 appropriate Editorial Board members, 3 NAS members who are expert in the paper's scientific area, and 5 qualified referees. The Editorial Board may choose an editor for the paper who is not on that list or may reject the paper without further review. The editor conducts the review of the paper as described for Track I. A link to the directory of Academy members and their research interests is on the NAS web site at [www.nasonline.org](http://www.nasonline.org) (click on the link labeled "Members"). The name of the editor, who may remain anonymous to the author until the paper is accepted, will be published in PNAS as editor of the article.

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**All Tracks.** Manuscripts submitted under any of the three tracks are evaluated by the Editorial Board. The Board may reject

manuscripts without further review or may subject manuscripts to review and reject those that do not meet the standards of the journal. Manuscripts rejected by one member cannot be resubmitted through another member. When revisions are requested prior to final decision, revised papers must be received within three months or they will be treated as new submissions.

In the journal, Track I, II, and III papers are distinguished respectively as "Communicated by," "Edited by," and "Contributed by" the responsible editor. Track II papers have an additional identifying footnote.

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(i) Articles are accepted provided they have not been **Published Previously** or concurrently submitted for publication elsewhere. Related manuscripts that are in press or submitted elsewhere must be included with your PNAS submission.

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(ii) **Authorship** should be limited to those who have contributed substantially to the work. The corresponding author must have obtained permission from all authors for the submission of each version of the paper and for any change in authorship.

All collaborators share some degree of responsibility for any paper they coauthor. Some coauthors have responsibility for the entire paper as an accurate, verifiable report of the research. These include coauthors who are accountable for the integrity of the data reported in the paper, carry out the analysis, write the manuscript, present major findings at conferences, or provide scientific leadership to junior colleagues. Coauthors who make specific, limited contributions to a paper are responsible for their contributions but may have only limited responsibility for other results. While not all coauthors may be familiar with all aspects of the research presented in their paper, all collaborators should have in place an appropriate process for reviewing the accuracy of the reported results.

Authors must indicate their specific contributions to the published work. This information will be posted online as a footnote to the paper. Examples of designations include:

- Designed research
- Performed research
- Contributed new reagents or analytic tools
- Analyzed data
- Wrote the paper

An author may list more than one contribution, and more than one author may have contributed to the same aspect of the work.

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(iv) A completed form assigning **Copyright** to the National Academy of Sciences must be returned to the PNAS office before the paper can be published. This and other forms are available at [www.pnas.org](http://www.pnas.org).

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(vii) For research using **Recombinant DNA**, physical and biological containment must conform to National Institutes of Health guidelines or those of a corresponding agency.

(viii) Authors must make **Unique Materials** (e.g., cloned DNAs; antibodies; bacterial, animal, or plant cells; viruses; and computer programs) promptly available on request by qualified researchers for their own use. Failure to comply will preclude future publication in the journal. It is reasonable for authors to charge a modest amount to cover the cost of preparing and shipping the requested material. Contact pnas@nas.edu if you have difficulty obtaining materials.

(ix) **Databases:** Accession codes must be supplied for publication. A footnote indicating that the data have been deposited will be added to the paper.

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Supporting Information may take the form of supplemental figures, tables, datasets, derivations, and videos. Authors should express their interest in their cover letter to include Supporting Information with their paper. In addition, editors may suggest that part of the submitted data could be more suitably presented online only to save journal space and to focus the article.

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**Contact Information.** Proceedings of the National Academy of Sciences, 500 Fifth Street, NW, NAS 340, Washington, DC 20001 USA. Courier or express mail: PNAS, 2101 Constitution Avenue, NW, NAS 340, Washington, DC 20418 USA. Phone 1-202-334-2679, fax 1-202-334-2739, e-mail [pnas@nas.edu](mailto:pnas@nas.edu).

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**Digital Figures.** TIFF and EPS for Macintosh or PC are the only acceptable formats for figures that will appear in the print journal. (See *Supporting Information* below for acceptable formats for online-only supplementary material.) All color images must be in CMYK (cyan, magenta, yellow, black) mode. Include the font files for any text. PC or Macintosh versions of Adobe PostScript fonts must be used (no system "bitmap" fonts). Images must be final size, preferably 1 column (8.7 cm) width. Figures wider than 1 column should be between 10.5 and 18.0 cm wide. Numbers, letters, and symbols should be at least 2 mm in size after reduction and must be consistent. Composite figures must be preassembled. Details are at [www.pnas.org/misc/digitalart.pdf](http://www.pnas.org/misc/digitalart.pdf). Direct questions to [caham@cadmus.com](mailto:caham@cadmus.com).

**Tables.** Number tables (Arabic numerals) in the order in which they are cited in the text. Each table should have a brief title, be on a separate page, and be double-spaced.

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Authors who place detailed materials and methods in Supporting Information must provide sufficient detail in the print edition methods to enable a reader to follow the logic of the procedures and results, and must reference the online methods. If a paper is fundamentally a study of a new method or technique, then the methods must be described completely in the print edition.

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**Manuscript Length.** PNAS generally uses a two-column format averaging 60 characters, including spaces, per line. The maximum length of a research article is six printed pages or 47,000 characters, including all text, spaces, and the number of characters displaced by figures, tables, and equations. The total number of characters equals:

- The number of characters *including* spaces in the text (include all parts except tables), **plus**
- The height in cm of each figure at desired printed size  $\times 180$  for a one-column figure or  $\times 360$  for a two-column figure, **plus**
- The height in number of lines of each table  $\times 60$  for a one-column table or  $\times 120$  for a two-column table, **plus**
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- An additional 60 characters for each one-column line of equation.
- A table that has lines with more than 60 characters plus spaces or a figure that is wider than 8.7 cm takes up *two* columns in width.

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**Classification:** Select a major (Physical, Biological, or Social Sciences) and a minor category from the following. Dual classifications are permitted *between* major categories and in exceptional cases, subject to Editorial Board approval, *within* a major category.

**PHYSICAL SCIENCES:** Applied Mathematics, Applied Physical Sciences, Astronomy, Chemistry, Computer Sciences, Engineering, Environmental Sciences, Geology, Geophysics, Mathematics, Physics, Statistics, and Sustainability Science.

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**Corresponding author:** The name, complete address, telephone and fax numbers, and e-mail address of the author to whom correspondence and proofs should be sent. Mailing and e-mail addresses will appear in print and online.

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**Abbreviations footnote:** List nonstandard abbreviations used five or more times. Define these where first mentioned in the text and do not use them in the title.

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The corresponding author must be prepared to provide a signed authorization for the citation of unpublished data and personal communications.

Journal articles are cited as follows:

10. Neuhaus, J.-M., Sitcher, L., Meins, F., Jr., & Boller, T. (1991) *Proc. Natl. Acad. Sci. USA* **88**, 10362–10366.

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Articles or chapters in books are cited as follows:

14. Hill, A. V. S. (1991) in *Molecular Evolution of the Major Histocompatibility Complex*, eds. Klein, J. & Klein, D. (Springer, Heidelberg), pp. 403–420.

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