A guide for **Authors** from the **Editors** at Science

AAAS

non-profit community respected outreach global visibility impact

About the *Science* Family of Journals

AAAS publishes six respected peer-reviewed journals:

- *Science* — the premier global science weekly.
- *Science Advances* — an innovative and high-quality open access journal for all the sciences.
- *Science Immunology* — research articles that report critical advances in all areas of immunological research, including important new tools and techniques.
- *Science Robotics* — an interdisciplinary journal covering the traditional disciplines of robotics as well as emerging trends.
- *Science Signaling* — uncovering mechanisms in biology, gaining insights into physiology and disease.
- *Science Translational Medicine* — integrating medicine, engineering and science to promote human health.

Science Journals and Open Access

AAAS supports Open Access in principal, but believes further analysis and discussion is needed to determine the best way of achieving goals in Open Access. Currently, all our journals are Green with the exception of *Science Advances* which is Gold.

Science Journals Open Access Policies

Green Open Access (*Science, Science Immunology, Science Robotics, Science Signaling, Science Translational Medicine*) permits self-archiving by the author of a version of their paper in an online archive or website that is freely accessible while the final published version often remains subject to the publisher's re-use terms.

Immediately after publication, authors may post the accepted version of their paper on their personal or institutional archival website.

Authors who are subject to a funding agency requirement to make their research results publicly available may post the accepted version of their paper to the funding body's archive or designated repository (such as PubMed Central) under a 6-month embargo.

Gold Open Access (*Science Advances*) provides free access to the final published version of articles on the journal website with, typically, few restrictions on how the article can be re-used.

Articles published in *Science Advances* are freely available to all on the *Science Advances* website immediately upon publication. *Science Advances* asks authors to choose one of two Creative Commons licenses to publish their article under, either the CC BY-NC license, or the CC BY license.

Why publish?

Part of the research process is the presentation of your methods or results at conferences and in peer reviewed papers. But deciding when to publish and whether to publish as a single large paper or a series of papers can be a difficult decision to make. While there is pressure to amass a long publication record and to publish in high profile journals, these should not be the factors that drive the research, nor should they be the primary factors in deciding where and when to publish. Every paper should reflect a complete story; by putting too much into a paper its core message can be lost, and by slicing your research into too many papers it can appear inconsequential.

Why publish in a *Science* journal?

As the longstanding publisher of *Science*, the AAAS has assembled a team of editors, reporters, press officers, artists and designers who are committed to presenting some of the broadest scientific stories and breakthroughs to a wide audience. Research papers are improved by going through our editorial review processes. In some cases, there may be scope to enhance or highlight your work with additional online components such as, social media postings, podcasts, or video presentations as well as by a commentary.

This dedicated hands-on effort, and the high standards that all *Science* journals aspire towards, make them popular places to publish. It can be hard to get your paper to and through the review process, and ultimately accepted for publication. This means that you need to present your work as best you can, by starting with a well-written paper that will have appeal beyond its core audience. Whether you choose to submit to a *Science* journal or to a different publisher, we hope this guide will help in the preparation of your paper and the selection of the best journal for its publication.

A guide to writing good papers for any journal

A good scientific paper tells a story, describes how the research work was done so that the study can be replicated, indicates the new developments and discoveries, and helps put it all into broader context.

- ❒ Start with the figures — these are key for both showing your methodology and for providing the data to justify your conclusions. Figure captions should describe the figure, but should not interpret the results or delve into analysis, the information should only be in the main text.

- ❒ Put your work into broader context. This is particularly important when submitting to a journal that covers a wide range of disciplines, such as *Science* or *Science Advances*, or a journal with an audience that spans from basic science through applications and clinical use, such as *Science Translational Medicine*. Providing context is important for any storytelling — good papers tell a story without losing the readers, and encourage the audience to read further at each stage.

- ❒ Don't lose readers in terminology or by skipping steps in your logic or analysis. Jargon is rarely necessary — should be avoided and should never appear in the abstract and introductory paragraphs. The same is true about using acronyms. Common ones such as those for techniques are expected, but using too many or uncommon acronyms can make a paper much harder to read.

- ❒ One method for starting to write a paper (or abstract) is to start with the core results and then work backwards and forwards — backwards to put in the necessary background knowledge including a balanced view of the existing literature, and forwards to develop the right discussion and conclusions based on the data that has been presented.

Should I ever contact the Editors?

Does it ever make sense to contact the Editors before or after you submit a paper?

Sure — there may be many occasions where a friendly, focused email is worthwhile. Our jobs aren't just to shuffle paper (or electrons these days), but to ensure that the papers our journals publish are presented in the best way possible. We work with authors and referees — not separate from either group.

If you are not sure if your paper fits the scope of a particular journal then a pre-submission inquiry may be warranted. For example, *Science Immunology* encourages pre-submission inquiries of abstracts to determine if a paper fits the scope of the journal. However, *Science Advances* does not accept pre-submission inquires. If the paper is fully written it is better just to submit, as the Editors only have limited time to answer these sorts of queries. For journals that use an outside advisory board, only limited feedback can be given at the inquiry stage as they can only be contacted for papers that have been formally submitted.

If you receive reviews that don't make sense, or the referees seems to be asking for extensive additional research to answer their concerns, the handling Editor is the person to contact. Similarly, if a reject decision doesn't make sense it may be worthwhile to ask for a clarification — but please appreciate that Editors must focus their time on active papers. It may be tempting to appeal every reject decision, but this is an unhelpful approach to take. However, if referees have made technical errors in their assessment, or a clear bias has emerged in the reviews, it may be worthwhile to discuss the possibility of an appeal with the Editor.

The submission process

Papers for all *Science* family journals are handled at cts.sciencemag.org/scc/login.html

You should always include a cover letter with your submission. The cover letter lets you speak directly to the Editor, and in particular to discuss details of the research that may not be covered in the abstract or main text. A well-crafted cover letter will only help a paper, but it should not be overly long or try to "oversell" the research. A cover letter can be used to place the paper in the context of the field, highlight the main findings, or discuss editorial concerns such as competition, conflicts of interest, and related or competing papers and publication timing.

You are encouraged to suggest potential referees. These provide a guide for the Editors, but also give some indication of how to view your own work within the broader community — something of particular importance for research that is multidisciplinary. You can also indicate referees that should be excluded, but these should be limited to direct competitors, or those with clear personal or scientific bias.

You should take the time to proofread your documents and figures before submitting. Sloppy errors detract from a paper. When submitting to any higher impact journal, Editors expect that authors will take the time to put together a polished submission.

Do authors need to reformat their paper for a particular *Science* journal before submitting?

The answer is "yes" and "no". For example, the standard length for a *Science* report is 2,500 words, so if your paper is 8,000 words long, it doesn't fit the journal's standards. But conversely we do not need you to reformat your figures or references to match our style at the time of submission. Other *Science* journals have different requirements and flexibilities. For example, *Science Advances* allows research articles up to 15,000 words.

The revision process

Even when you disagree with a specific comment, you should look at the referee and Editor comments as questions. There may be situations where the science is correct, but the text has been misunderstood. Does the paper really say what you think it says? There may also be reasons to discuss the reviews with the handling Editor to decide which requests are reasonable and which are truly beyond the scope of the current research. A good author response will acknowledge every point made by a referee, even if the authors disagree with the comment. Debate and discussion are part of the scientific process; being rude or dismissive isn't appropriate, neither as referee nor as an author in writing a response.

Transfers between *Science* journals

Papers rejected by one *Science* journal may, in some cases, be worth considering for publication in a different *Science* journal. You can indicate your preference for a transfer at the time of submission or the Editors may suggest a transfer. Editors at the second journal may use the information gathered during evaluation at the first journal to expedite review; including reuse of reviews and comments provided that the referees agree to their comments being transferred. Alternately, you may choose to submit your work as a new manuscript. However, a transfer can only include documents that were part of the review process. Once transfer is completed, you will have the opportunity to upload a response to the reviews and/or a revised manuscript where appropriate, depending on the procedures at the second journal.

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Science is a weekly, peer-reviewed journal that publishes significant original scientific research, plus reviews and analyses of current research and science policy. We seek to publish papers that are most influential in their fields or across fields and that will significantly advance scientific understanding. Selected papers should present novel and broadly important data, syntheses, or concepts. We welcome submissions from all fields of science and from any source.

We are committed to the prompt evaluation of submitted papers. Most papers are published in print and online 4 to 8 weeks after acceptance. In addition, *Science* selects several papers for earlier online publication in First Release, using the accepted version of the paper with minimal copy editing. The official publication date of these papers is the date that they are posted online. Requests for accelerated online publication should be explained to the Editors in the cover letter.

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As a "Gold" open access journal, *Science Advances*:

- ❒ Is led by an Editorial Board of active pre-eminent researchers.
- ❒ Publishes significant, innovative original research that advances the frontiers of science and extends the standards of excellence established by *Science*.
- ❒ Publishes in a broad array of fields including computer, engineering, environmental, life, mathematical, physical, and social sciences.
- ❒ Promotes and exemplifies concise, readable prose that allow scientific findings to be understood by a broad range of readers.
- ❒ Publishes cross-disciplinary research and collaborations, encourages innovative approaches to complex scientific and social problems, and supports open discourse among readers in diverse areas of interest and expertise.
- ❒ Promotes and upholds the highest standards in the conduct and communication of scientific research.

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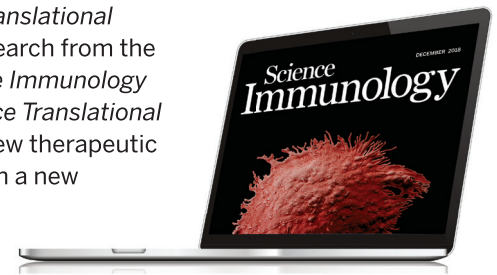
Science Immunology aims to facilitate understanding of the immune system by showcasing innovative advances in the expanding field of immunology, drawing from studies in all organisms and model systems including humans. Areas covered range from basic studies into the biology of innate and adaptive immunity (immune cell development and differentiation, immunogenomics, systems immunology, structural immunology, antigen presentation, immunometabolism, and mucosal immunology) to immune contributions to health and disease (host defense, inflammation, cancer immunology autoimmunity, allergy, transplantation, and immunodeficiency).

How does *Science Immunology* differ from the coverage of immunology in other *Science* titles like *Science Translational Medicine*?

While there is some overlap in interests, *Science Translational Medicine* aims to publish papers that move the research from the laboratory into the clinic, while the focus of *Science Immunology* is the discovery of new biology. For example, *Science Translational Medicine* might publish a paper that tested out a new therapeutic candidate, while *Science Immunology* might publish a new biologically validated target even if a drug isn't available yet.



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Science Robotics

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Science Robotics publishes advances in research and development of robotics for all environments by providing a central forum for communication of the most exciting new discoveries as well as covering critical social, ethical and policy issues surrounding robotics. *Science Robotics* caters to both researchers and general stakeholders and covers the traditional disciplines of robotics, as well as emerging trends such as advanced materials and bio-inspired designs, and findings from very large systems to those from micro/nano robots.

The Editors of *Science Robotics* realize that the field spans from basic science on materials and power systems, to computer science, engineering and medicine. The goal of *Science Robotics* is to provide a home for all these communities and to foster communication and collaboration between them.

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Science Signaling

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Science Signaling is a weekly online multidisciplinary journal for the life sciences. The aim of the journal editors is to publish studies that uncover the basic mechanisms that underlie biological processes across all organisms. Particular emphasis is placed on studies that provide new insights into physiology; delineate aberrant mechanisms that cause disease; identify new potential therapeutic targets and strategies; and characterize the effects of drugs in vitro and in vivo.

Benefits of submission to *Science Signaling*:

- ❒ Rapid initial evaluation by staff Editors and our Board of Reviewing Editors
- ❒ No article page limits
- ❒ Scoop protection for active submissions
- ❒ Enhanced article visibility:
  - Every article is featured on the table of contents and in the rotating carousel of images.
  - Research articles are promoted through social media.
  - Select research papers are highlighted in Focus pieces.
  - Press coverage through the AAAS Press Office.
  - Editorially selected articles are featured in *Science*.

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Science Translational Medicine is the leading weekly online journal publishing translational research at the intersection of science, engineering and medicine. The goal of *Science Translational Medicine* is to publish articles that fill the scientific knowledge gaps at the junction of preclinical research and medical applications to accelerate the translation of this knowledge into new ways for preventing, diagnosing and treating human disease.

Science Translational Medicine publishes original, primary scientific research advances from across all areas of biomedicine including studies in animal models of human disease and early clinical trials. The rigorous peer-review process defines the journal as a prestigious and trusted source of new scientific information. In addition to original research, the journal also publishes Focus articles, Perspectives, Reviews and Editorials.

The scope of content in *Science Translational Medicine* includes cardiovascular disease; cancer; metabolism, diabetes and obesity; neuroscience, neurology, and psychiatry; immunology and vaccines; infectious diseases; bioengineering and devices; drug discovery; imaging; medical nanotechnology; drug delivery; biomarkers; gene therapy; tissue engineering and regenerative medicine; genomics, systems biology and artificial intelligence.

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About the AAAS

The AAAS seeks to "*advance science, engineering, and innovation throughout the world for the benefit of all people*". To fulfill this mission, the goals of the AAAS are to:

- ❒ Enhance communication among scientists, engineers, and the public.
- ❒ Promote and defend the integrity of science and its use.
- ❒ Strengthen support for the science and technology enterprise.
- ❒ Provide a voice for science on societal issues.
- ❒ Promote the responsible use of science in public policy.
- ❒ Strengthen and diversify the science and technology workforce.
- ❒ Foster education in science and technology for everyone.
- ❒ Increase public engagement with science and technology.
- ❒ Advance international cooperation in science.

A Member—Focused Organization

The world's largest multidisciplinary scientific society and a leading publisher of cutting-edge research through its *Science* family of journals, the AAAS has individual members in more than 91 countries around the globe. Membership is open to anyone who shares our goals and belief that science, technology, engineering, and mathematics can help solve many of the challenges the world faces today. You can lend your support to our efforts on behalf of scientists, engineers, educators, and students everywhere by becoming a member.

Together we can make a difference.

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