

Critical stages of grant applications...

Generate an idea

- Why is this interesting and who cares?
- Who will benefit from your work?
- How novel is this idea?
- Why am I the best person to do this?
- Can I realistically achieve what I claim?

Find a matching funding opportunity

- Look at who funds similar research
- Be aware: different agencies support different types of projects
- Scan for available calls
- Be willing to cast a wider net
- Think outside of the box. Keep your mind open

Background research

- Understand the different agencies and their styles
- Talk to the Program Manager – they are used to cold calls!
- Do the literature search, it can save you weeks of writing!
- Assume the panel members know nothing about your work, but everything about your competitors
- Don't expect the panel members to be experts in your field, put your idea into context

Write the technical portion

- What problem are you addressing?
- Why hasn't it been solved yet?
- Why do you think you will succeed?
- What is your hypothesis?
- What is your work plan and what are your milestones?
- How will you measure success?

Check the administrative parts

- Read the call – again and again and again...
- Calls are usually specific about the formats they require
- Terms like “required” and “must include” should be adhered to
- Work on your budgets and other documents in advance – be prepared
- If you need external letters, give people enough time to get them to you

Submit and forget about it

- Allow enough time to upload the files and check pdfs for readability and errors
- Many agencies systems get very busy during submission times – accept and prepare for this
- Once submitted, forget about the proposal until you hear from the review panel
- Make sure that the agency communications don't get filtered into your spam folder
- Many agencies will return detailed reviews. Use the review to revise and resubmit your grant

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Top tips and tricks

Time keeping: Be realistic about the time it takes to write the grant - grants are like an ideal gas, they fill all the space available to them.

Check your style: Do not use tiny fonts, even if the call doesn't have a lower limit. 11 point is probably as low as you can go. Leave ample margins (3/4 in is pushing it). Avoid passive voice and tell a story.

Know your audience: Find out more about your funding agency and use it to your advantage e.g. emphasize basic science for NSF, healthcare for NIH or technology for DARPA etc.

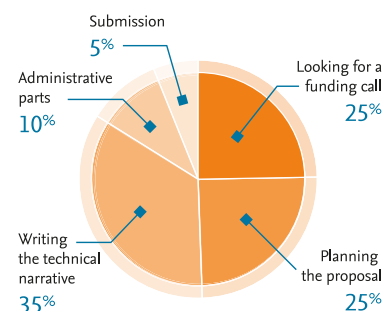
Connect and network: Grant calls include the contact information for a reason. Call the Program Manager as they seldom can answer all their emails. Prepare all your questions in advance.

Recycle but be warned: If you reuse parts of older grants (everybody does it) watch for the items specific to older grants in those texts - nothing reveals a quick hack job better.

Size matters: When it comes to budget be frugal but realistic. The average size of the award specified in the call is a good indication of the scope of work the Program Manager has in mind.

Be original! Try to be original and propose ideas that make sense, not just the “boilerplate”. Reviewers have read the “boilerplate” many times before. But don't forget to explain things that look unusual.

Time and effort for a typical grant



And remember...

- Always assume any problems were your fault, not the reviewer
- If the reviewer has misunderstood something, then you did not explain it clearly enough
- Make sure you invest considerable work and effort in any revision – reviewers will likely do the same

...and finally – good luck!

How to Get Published

What distinguishes a good manuscript from a bad one?

A good manuscript...

...is in scope

Investigate all candidate journals and find out about the:

- Aims and scope
- Accepted types of articles
- Readership
- Current hot topics by going through the abstracts of recent publications

...adheres to publication ethics

- Avoid plagiarism of others' work
- Avoid multiple publication of the same work, never submit your manuscript to more than one journal at a time
- Cite and acknowledge others' work appropriately
- Only list co-authors who made major contributions

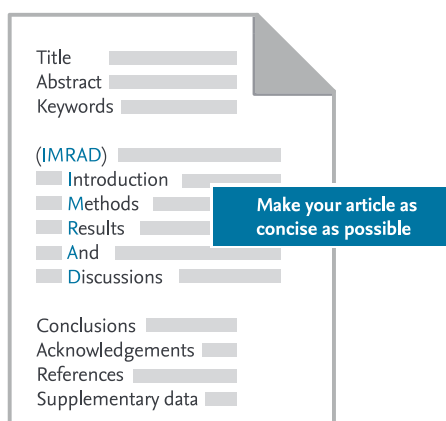
...follows the Guide for Authors

- Stick to the [Guide for Authors](#) in your manuscript, editors do not like wasting time on poorly prepared manuscripts

You can find the [Guide for Authors](#) on the journal's homepage on [elsevier.com](#).



Article Structure



Illustrations

Illustrations are critical, because...

- **Figures and tables** are the most efficient way to present results
- **Results are the driving force of the publication**
“One picture is worth a thousand words.”
Sue Hanauer (1968)
- **Captions and legends** must be detailed enough to make figures and tables self-explanatory
- **No duplication of results** described in text or other illustrations

Use proper manuscript language

Publishers do not correct language, this is the author's responsibility.

- Ask an **experienced colleague** or use a **language editing service** like to improve your paper before you submit it
- Poor English makes it difficult for the editor and reviewers to understand your work and might lead to **rejection of your paper**
- Be alert to common errors:
 - Sentence construction
 - Incorrect tenses
 - Inaccurate grammar
 - Mixing languages
- English language should be used throughout the manuscript, including figures, charts, graphs and photos

Are you ready to submit?

Roughly 35% of all submitted manuscripts are rejected before peer review. Make sure you revise before you submit.

- Do your findings advance understanding in a specific research field?
- Is your work of interest to the journal's audience?
- Is your manuscript structured properly?
- Are your conclusions justified by your results?
- Are your references international/accessible enough?
- Did you format your figures and tables properly?
- Did you correct all grammatical and spelling mistakes?

Make sure you are equipped!

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What does it mean to be an author?

An “author” is generally considered to be someone who has made substantive intellectual contributions to a published study.”

Remember

- Being an author comes with credit but also responsibility
- Decisions about who will be an author and the order of authors should be made before starting to write up the paper

Four criteria to be met to attain author credit

- ① Substantial contribution to the study conception and design, data acquisition, analysis, and interpretation
- ② Drafting or revising the article for intellectual content
- ③ Agreement to be accountable for all aspects of the work related to the accuracy or integrity of any part of the work
- ④ Approval of the final version

Three types of unacceptable authorship

- ① “Ghost” authors, who contribute substantially but are not acknowledged (often paid by commercial sponsors)
- ② “Guest” authors, who make no discernible contributions, but are listed to help increase the chances of publication
- ③ “Gift” authors, whose contribution is based solely on a tenuous affiliation with a study

Key author responsibilities

Authorship:

- Report only real, unfabricated data
- Originality
- Declare any conflicts of interest
- Submit to one journal at a time

Avoid:

- Fabrication: making up research data
- Falsification: manipulation of existing research data
- Plagiarism: previous work taken and passed off as one's own

What is plagiarism and how is it detected?

“Plagiarism is the appropriation of another person’s ideas, processes, or words without giving appropriate credit, including those obtained through confidential review of others’ research proposals and manuscripts.”

Federal Office of Science and Technology Policy, 1999

- Crossref Similarity Check is a huge database of 30+ million articles, from 50,000+ journals, from 400+ publishers
- The software alerts editors to any similarities between your article and the huge database of published articles
- Many Elsevier journals now check every submitted article using Crossref Similarity Check



Work that can be plagiarised includes...

- Words (language)
- Ideas
- Findings
- Writings
- Graphic representations
- Computer programs
- Diagrams
- Graphs
- Illustrations
- Information
- Lectures
- Printed material
- Electronic material
- Any other original work

Declare conflicts of interest

Conflicts of interest can take many forms:

- Direct financial: employment, stock ownership, grants, patents
- Indirect financial: honoraria, consultancies, mutual fund ownership, expert testimony
- Career and intellectual: promotion, direct rival institutional Personal belief

The consequences

Authors could:

- Have articles retracted (carrying a note why they were retracted, e.g. for plagiarism)
- Have letters of concern or reprimand written to them
Institutes and funding bodies could carry out disciplinary action

Peer review

...is critical because it

- Improves the quality of the published paper
- Ensures previous work is acknowledged
- Determines the importance of findings
- Detects plagiarism and fraud
- Plays a central role in academic career development

...will benefit you because it

- Keeps you up to date with the latest research
- Stimulates your own research
- Helps you build association with journals and editors
- Is imperative for academic career development

...Before you review

- Does the article match your area of expertise?
- Do you have competing interests?
- Do you have time? Make sure you can meet the deadline
- Familiarize yourself with the peer review process on Researcher Academy

Your ultimate checklist for reviewing a paper

DO:

- Summarize the article in a short paragraph
- Give your main impressions of the article
- Assess whether the article conforms to journal-specific instructions
- Check the graphical abstracts and/or highlights
- Carefully review the methodology, statistical errors, results, discussion, and references
- Keep your comments strictly factual and don't speculate
- Use short, clearly-defined paragraphs
- Provide feedback on the presentation of data, methodological sustainability and reproducibility, data analysis and whether the conclusions are supported by the data
- Inform the editor if you suspect plagiarism, fraud or other ethical concerns
- Be aware of the possibility for unconscious bias in your review

DON'T

- Feel the need to comment on the spelling, grammar or layout of the article
- Make ad-hominem comments
- Dismiss alternative viewpoints or theories that might conflict with your own opinions
- Share information about the review without permissions from the editors and authors
- Suggest that the author includes citations to reviewers' (or their associates') work

Editors' view: what makes a good reviewer?

- Promptly responds to the invitation to review
- Submits the report on time
- Provides a thorough and comprehensive report
- Demonstrates objectivity
- Provides a clear recommendation to the editor