

Resource Guide for Scientific Writing, Presentations, and More

UCSF Department of Surgery



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For personal

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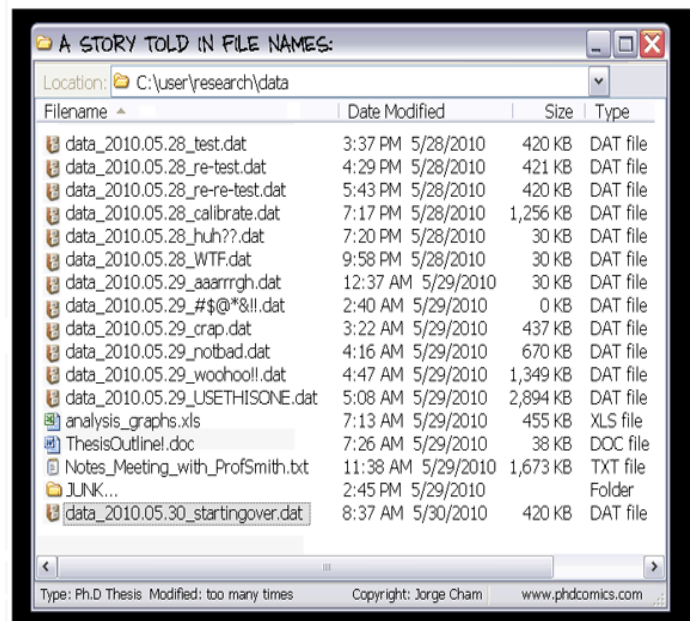
A. INTRODUCTION

At the core of success in academic biomedicine is research and publication of the results in a peer-reviewed biomedical journal. For clinical and basic science researchers forging an academic career, publication documents not only their intellectual property but also their productivity. Publication justifies funding for research, makes reputations, and builds careers. Too often, the actual writing of scientific papers and grant applications is a skill more or less learned by “osmosis” in academic biomedicine. This resource guide¹ is intended to help you succeed in writing, publishing, and presenting your research, preparing fundable grant proposals, and if you are a resident, preparing CVs and personal statements for fellowships.

B. WRITING PAPERS

1) Get Organized. Before you can write you need to figure out which findings to present in this paper. Start with a plan or outline of your key results and the data, figures, and tables that support those results. The best papers are often hinged on a *single* main finding, and that finding is directly linked to the question or hypothesis that led you to do the study.

Once you have your tables and figures, you can draft the Results section to follow them (e.g., for *clinical/epidemiological studies*: subjects, univariate main outcome, multivariate associations with main outcome, sub-analysis of important groups and potential biases; for *basic science studies*: experiments in chronological order or most important first, followed by supporting and mechanistic data). After following steps 2-4, you can go ahead and write the other parts of the paper.



¹ Sources: Annesley T (w/contributions from Derish P) *Designing and Writing Scientific Papers*. AACC Press, 2014; Browner, WS. *Publishing and Presenting Clinical Research*. Baltimore: Lippincott Williams & Wilkins, 1999; Derish PA, Eastwood S. A Clarity Clinic for Surgical Writing. *Journal of Surgical Research* 2008;147:50-58; Eastwood S, Derish PA, Berger MS. Biomedical Publication for Neurosurgery Residents: A Program and Guide. *Neurosurgery* 2000;47:739-749; Huth EJ. *How to Write and Publish Papers in the Medical Sciences* (third edition). Baltimore: Williams & Wilkins, 1999; Ordway, SB., Gladstone Foundation, San Francisco, California, 2006; Zeiger, M: *Essentials of Writing Biomedical Research Papers* (second edition). New York: McGraw-Hill, 1999.

2) Decide on the Journal. You and your collaborators will make that decision based on several considerations, including the scientific merit of the findings, the intended audience, and the prestige of the journal. The key is to find the right audience for the message of the paper. To do this, you need to answer two questions: What do you have to say and who needs to hear about it? (aka the “So What and Who Cares” test). The choice of a journal will dictate the length of your paper and its overall organization.

3) Read the Journal’s Instructions for Authors. Journals differ in their requirements for style, format, and organization of manuscripts. *Most journals place limits on the number of words or characters in a manuscript or in sections of the manuscript.* To save yourself the agony of having to cut a manuscript by hundreds (or thousands) of words, read the journal’s Instructions to Authors *before you begin to write and follow those instructions to the letter.* Consult a recent issue to be certain your paper is written in the journal’s preferred style. Reading sample articles can also clarify aspects of manuscript preparation and formatting not specifically mentioned in the instructions. Editorial processing goes faster if you have followed the journal’s instructions carefully. Not following the instructions can delay publication and make more work for you at a time when you should be working on your *next* article!

4) Know Your Audience. Writing to be *published* is not the same thing as writing to be *read*. Journal editors choose articles with their readers in mind. Communicating scientific findings in a journal means you have an audience of readers—you aren’t just writing for the scientists who will serve as peer reviewers for your work. To communicate effectively with a varied audience (from graduate students to Nobel laureates), plan to go through several drafts to make sure that the message of the paper is not obscured by poor organization, gaps in logic, excessive detail, and wordiness (See part C below on *Revising Your Prose*).

5) Determine the Structure of the Paper. Most biomedical research papers consist of four main sections, each of which have a specific purpose and should contain only certain types of information:

- Introduction – Awaken interest, orient the reader, establish study question or hypothesis.
- Methods – Describe what you did—in enough detail—so readers can judge whether the findings you report in your Results section *are reliable support for your conclusions.*
- Results – Present the findings of the experiments or procedures described in the Materials and Methods section and refer the reader to the data in tables and figures that support the results.
- Discussion – Answer the question(s) posed in the introduction and briefly convey how the results support your answer. Explain how your findings and conclusions relate to existing knowledge on the subject.

In most biomedical journals, the order of the sections is as follows: Introduction * Materials and Methods * Results * Discussion. That sequence is known as the “**IMRaD**” structure. However, for some basic science journals, the order is Introduction * Results * Discussion * Methods”, or “**IRDaM**”. That’s why is so important to identify the target journal *before* you write. Both types are covered in the resources below.

6) Resources for Writing Papers

Reports of Original Research

The links on the next page take you to two excellent series of short articles that will help you write each part of the research paper: Introduction, Methods, Results, Discussion, Title, Abstract, Figures, Tables, and related items. *If you are writing a paper that follows the IRDaM structure*, the only resource is an article in the collection of articles about scientific writing, published on the website of the journal *Clinical Chemistry*. NOTE: All articles in the *Clinical Chemistry* series are available in Spanish and Chinese translations.

- *Clinical Chemistry* Guide to Scientific Writing:
http://www.aacc.org/publications/clin_chem/ccgsw/Pages/default.aspx
 for papers that follow the IRDaM structure, see:
[Part 6. If an IRDAM Journal Is What You Choose, Then Sequential Results Are What You Use](#)
- *Chest Journal* Medical Writing Tips:
<http://journal.publications.chestnet.org/collection.aspx?categoryid=9199>

Prefer a checklist approach? Try [mine](#), which is posted on the website [ResearchGate](#).

How about an “18-paragraph” approach? Read *Writing it up: a step-by-step guide to publication for beginning investigators*, by Mark Kliewer. The DOI link is here: [10.2214/ajr.185.3.01850591](https://doi.org/10.2214/ajr.185.3.01850591)

You can also [view my PowerPoint Slides on the Structure and Content of Research Articles](#) (also on the website: <http://sciencepubs.surgery.ucsf.edu/resources.aspx>).

Review Articles

For the traditional “narrative” or “scholarly” review, see here: <http://www.clinchem.org/content/57/3/388.full> and here: <http://www.ease.org.uk/sites/default/files/writing-reviews.pdf>

For a systematic review, this is *the* book: <http://onlinelibrary.wiley.com/book/10.1002/9780470693926>, but this article does a good job: <http://journal.publications.chestnet.org/article.aspx?articleid=1086444>

UCSF also offers a course on how to conduct a systematic review:
http://ticr.ucsf.edu/courses/schedule/systematic_reviews.html

Clinical Case Reports and Case Series

“Clear and accurate reporting of a study's design and results is crucial in allowing the clinician to determine the relevance of the study to his/her own practice, thus providing valuable information that can be directly applied to clinical decision making.”

Wynne et al., writing about reporting standards for clinical case series,
 in the *Journal of Pediatric Surgery* (2011) 46, 131–137

To ensure a high quality report of a case series, follow [the guidance established by the *Journal of Pediatric Surgery*](#).

For excellent advice about developing a surgical case series for publication, see [this article in *Plastic and Reconstructive Surgery*](#).

Also useful - [within this overview of writing and publishing advice for surgeons](#), scroll down to “Clinical Reports” section.

You can view my [PowerPoint Slides](#) on writing case reports and case series (also on the website: <http://sciencepubs.surgery.ucsf.edu/resources.aspx>).

Medical Education

Writing about curriculum development? A suggested format for organizing your manuscript [is available here](#).

Help with Statistics

Take advantage of this very understandable (for statistics!) series of articles geared towards clinicians:
http://www.collectionscanada.gc.ca/eppp-archive/100/201/300/cdn_medical_association/cmaj/series/stats.htm

This user-friendly website for statistical computation comes highly recommended:

<http://www.vassarstats.net/>

Consult with UCSF statisticians: <https://accelerate.ucsf.edu/research/biostat-consult>

C. REVISING YOUR PROSE

Once you've written the paper, your focus must turn to revising it so that your message is clear. Most any advice you read about writing scientific papers tells you to write *clearly*. It's easy to SAY this and quite another to DO it. Good writing is *rewriting*. Nobody writes a polished paper in one draft, or even two.

The Big Picture. In revising your manuscript, take care of the "big things" before you start worrying about the smaller details.

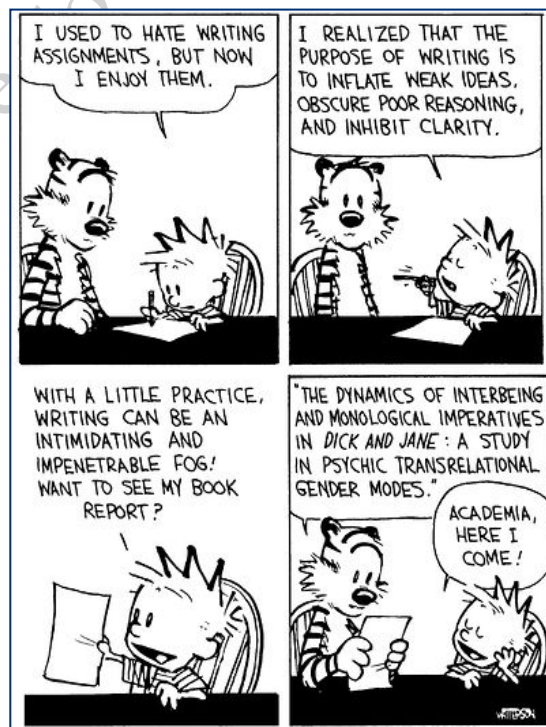
1) Make sure the various parts of the manuscript are in synch with each other. Is everything in the proper place? Is each part of the manuscript accomplishing what it's supposed to?

2) Read through the manuscript, putting yourself in the position of a reader who knows nothing about your work.

Is everything clearly and logically arranged? Are there any gaps in the logic or the story you're telling? Are there places where the reader might get bogged down in excessive detail? Are there internal inconsistencies? For example, does the conclusion of the abstract match the conclusion of the discussion?

3) Does each paragraph have a topic sentence? Is everything in the paragraph related to the topic and will the relationships be clear to the reader? Paragraphs should be clear, focused, and relatively short. If you find a paragraph that goes on for a page, or two pages, or more, break it into a series of shorter paragraphs. Make sure there are good transitions between paragraphs. *As the author, it is your job to make sure that the reader never has to struggle to understand what you're trying to say.*

4) Check each figure and legend against the text. Are they working synergistically, or is there excessive overlap? Are all the figures cited in the text? Do the citations in the text match the legends? Do the figures/panels cited actually support the statements made in the text?



The Details. Once you're satisfied that the "big picture" items are in place, you can focus on the details of revising individual sentences. *The key rule to remember in trying to achieve clarity is that your science is complex, so the goal is to keep everything else as simple as possible (despite what Calvin says in the adjacent cartoon).*

1. Use abbreviations (sparingly) for:

Long terms (e.g., HPLC)

Terms used many times

Terms known by their abbreviations

Define at first mention in abstract and in text.

Define only once. Delete if used infrequently.
 Check for "standard" abbreviations

2. Use precise words

increase/decrease NOT change; rat, mouse NOT animal

3. Use simple words

before NOT prior to; after NOT following; begin NOT initiate; is NOT constitutes, represents, etc.

4. Use fewer words

It is thought that.....They (we) think

It would thus appear that.....Apparently,

In light of the fact that.....Because

It is often the case that.....Often

It is possible that the cause is...The cause may be

5. Avoid running starts

It is interesting to note that...; It is not impossible that...; A not unlikely cause could be that...; It may be said that...etc. Delete these "IT...that" phrases.

6. Write simple, direct sentences

Complicated sentences are hard to follow, slow the reader down, and are often confusing. For a sentence to be simple and direct:

Make the topic the subject of the sentence.

Example: The mice showed no increase in lipid levels.

Revision: Lipid levels in the mice did not increase.

Put the action in the verb of the sentence.

Example: An increase in heart rate **was seen**.

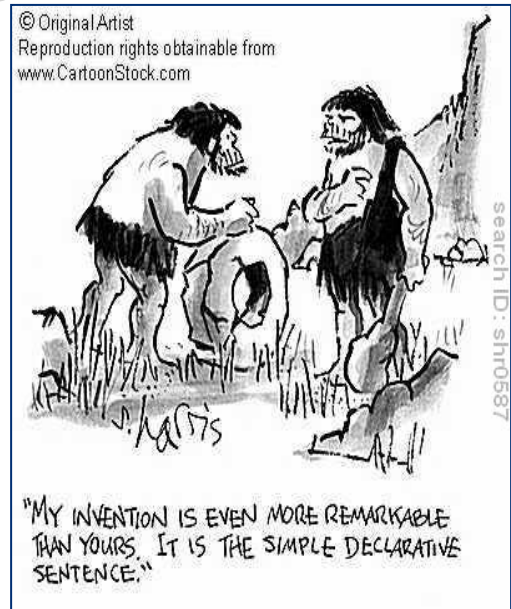
Revision: Heart rate **increased**.

To make the topic the subject and put the action in the verb, look for the following:

- *Nouns made from verbs:* formation, measurement, occurrence, removal
- "Increase" and "decrease" as nouns (this means the real action is not in the verb)
- *Weak verbs:* was achieved, was observed, occurred (weak verbs are used because if the real action is not in the verb, the sentence still needs a verb).

7. Write comparisons clearly

NOT "These results were similar to previous studies" (that's comparing "results" to "studies"), but "These results were similar to the results of previous studies" OR "These results were similar to those of previous studies".



Use "greater than" or "less than" instead of "compared to", especially when talking about an increase or decrease.

8. Use passive voice selectively

Use the *active voice* to focus on the person who is performing the action, as when stating a goal, intention, or hypothesis: "We tested the hypothesis".

Use the *passive voice* to emphasize the object that is being acted upon, as in describing a method. "Cells were washed".

9. Get the verb tense right

Use the *present tense* to describe what is known or generally accepted.

Use the *past tense* to describe what you did (Methods) and what you found (Results).

10. Avoid common writing problems

Use clear pronouns- be careful with the words "this" in particular, because often it doesn't refer back to anything (or if it does, it refers to the wrong noun!). If necessary, repeat the noun that "this" refers to.

Check that subject and verb make sense together. "Controls were performed" doesn't make sense.

"Control experiments were performed" does make sense.

Remember to use the correct "helping" verb" (were, was) when the subject shifts from plural to singular or vice versa (especially in the Methods section).

Watch out for dangling modifiers, especially in the Methods section:

Example. Blood flow was allowed to return to baseline before proceeding with the next experiment. (Blood flow is what proceeds with the next experiment!)

Revision. Blood flow was allowed to return to baseline before the next experiment began.

11. Write logically organized paragraphs

Paragraphs make your writing more accessible and easier to read because they break your writing up into manageable units that readers can process. They help you tell a clear story by treating *an idea in each paragraph* and connecting the paragraphs to each other. Well-written paragraphs usually make a point and develop it. You can follow the author's thinking because he or she has focused on a single idea and doesn't go off in several different directions.

To write well organized paragraphs:

- Use a topic sentence to state the main idea of the paragraph clearly and directly.
- Give the details that support the topic sentence in subsequent sentences.
- Supporting sentences should be organized in a logical way:
 - Most to least important
 - Pro-con
 - Pro
 - Con
 - Chronological order
 - Problem-solution
 - Solution-problem

12. Use continuity techniques

Continuity is the smooth flow of ideas from sentence to sentence (and from paragraph to paragraph). Even if a paragraph is well organized—that is, it has a topic sentence and logically organized supporting sentences—the story of the paragraph can be hard to follow if the paragraph lacks continuity. The essence of continuity is a *clear relationship* between every sentence and the sentence before it. Using topic sentences is one way to establish continuity, but there are other important ones to know about:

Key terms are terms that name important ideas in a paper. They can be technical like *G-protein*, *mitogenesis*, or *decisional conflict*. They can also be non-technical terms like *increase*, *function*, or *rural*. Repeating key terms *exactly* from sentence to sentence and paragraph to paragraph is the strongest technique for providing continuity. If a key term is not repeated exactly and instead, another term is used, the reader needs to do a mental manipulation to see the relationship between the two terms. In other words, it forces the reader to divert some of his or her attention from the science to the writing. **It comes between the reader and the message.** The clarity of the prose is affected, as T. E. Lawrence put it, "Prose is bad when people stop to look at it."

Transitions terms like *therefore* * *thus* * *for example* *first* * *second* * *third* * *last* * *in addition* * *in contrast* * *however* * *because* * *furthermore/moreover* * *in brief* * *although* * *whereas*, etc., let the reader know how each sentence relates to the story and how parts of sentences are related. They indicate your thinking. Without transitions, the logical relationship within a sentence and between sentences is destroyed.

For additional tips on revising your prose (and lots of examples), see: [Derish PA, Eastwood SA Clarity Clinic for Surgical Writing](#) (and my slides on [Achieving Clarity in Your Writing](#) (also on the website (*intranet login required*): <http://sciencepubs.surgery.ucsf.edu/resources.aspx>).

Writers need a good dictionary. The "[One Look Dictionary](#)" lets you look up English-language words in multiple dictionaries.

Still at a loss for words? The Academic Phrasebank <http://www.phrasebank.manchester.ac.uk> has you covered, with many examples of phrases to use, organized by the main sections of the research paper.

If you are a non-native speaker of English, you can find grammar help here: <http://owl.english.purdue.edu/owl/resource/678/01/>

Need editing help? See section G and <http://sciencepubs.surgery.ucsf.edu/editorial-consultation--review.aspx>

D. PUBLICATION ETHICS

Whether you are a postdoc or head of a lab, be well informed about the ethical issues of publishing your work. I recommend this easy-to-use poster, put out by the American Physiological Association (available in several languages too). It's somewhat oversimplified, but a great starting point:

http://www.the-aps.org/mm/Publications/Info-For-Authors/Ethics-Posters/Ethics_Poster_2008_aps-pdf.pdf

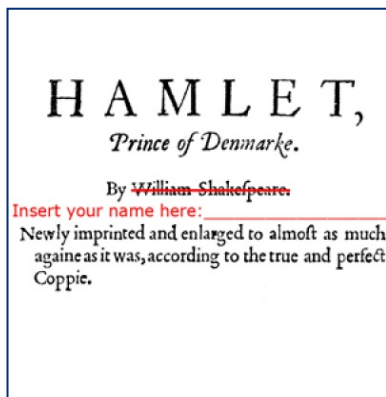
Plagiarism & Proper Citation of References

Plagiarism qualifies as a form of scientific misconduct, but many scientific authors don't know enough about this important issue.

“Approximately 25% of the total allegations received by the DHHS Office of Research Integrity concern plagiarism, and *these allegations typically represent misunderstandings of what exactly constitutes plagiarism and accurate citation procedures.*”

~ L. Cicutto, *Plagiarism. Avoiding the Peril in Scientific Writing*
Chest 2008

Institutional and journal definitions of plagiarism may vary. In general, plagiarism is the appropriation of another person's words, ideas or research results without acknowledgement, and passing them off as one's own. Be aware of UCSF's policies: <http://compliance.ucsf.edu/research-misconduct>.



Authors often don't realize it, but "text recycling" is a form of self-plagiarism" that is considered plagiarism by many journals and funding agencies. Also considered plagiarism is a practice called "patch writing" or "patch working", in which a writer copies passages from one or more sources *directly*, but combines them (hence, the "patchwork"), maybe changing some words or phrases, but without citing the sources. The problem of plagiarism has led many journals and funding agencies to routinely use plagiarism detection software. Journals usually have clear instructions for authors regarding plagiarism and use plagiarism-detection software on submissions. For further reference, see these articles (*you may need to cut/paste link into your browser but I've provided DOI for some*):

- Cicutto, L. Plagiarism. Avoiding the Peril in Scientific Writing. Chest 2008;133;579-581: <http://www.ncbi.nlm.nih.gov.ucsf.idm.oclc.org/pubmed/?term=Avoiding+the+Peril+in+Scientific+Writing>; DOI: 10.1378/chest.07-2326
- Roig, M., Plagiarism and Self-Plagiarism, What Every Author Should Know. Biochemia Medica 2010;20(3):295-300: <http://www.biochemia-medica.com/content/plagiarism-and-self-plagiarism-what-every-author-should-know>
- Cameron C, Zhao H, McHugh MK. Perspective: Publication Ethics and the Emerging Scientific Workforce: Understanding "Plagiarism" in a Global Context. Academic Medicine 2012;87(1),51-54: <http://www.ncbi.nlm.nih.gov.ucsf.idm.oclc.org/pubmed/?term=%09Cameron+C%2C+Zhao+H%2C+McHugh+MK>; DOI: 10.1097/ACM.0b013e31823aad7
- Shashok K. Authors, editors, and the signs, symptoms and causes of plagiarism. Saudi J Anaesth [serial online] 2011 [cited 2012 Mar 2];5:303-7

Questions about how to paraphrase? See https://writing.wisc.edu/Handbook/QPA_paraphrase.html

For ESL writers in particular, I suggest this excellent resource:

- <http://owl.english.purdue.edu/owl/resource/958/01/>

Plagiarism is an issue for grant proposals too:

- Markin K. Plagiarism in Grant Proposals: http://chronicle.com/article/Plagiarism-in-Grant-Proposals/136161/?cid=at&utm_source=at&utm_medium=en

Sloppy reference citation can lead to accusations of plagiarism. Be sure you know how to cite:

- Annesley TM. Giving Credit: Citations and References. Clinical Chemistry 2011;57:1

14–17: <http://www.clinchem.org/content/57/1/14.full>

Authorship (Criteria, Disputes)

Authorship problems have an incredibly long history in science. *Familiarize yourself with the criteria for authorship* set by the International Committee on Medical Journal Editors, which are followed by > 500 biomedical journals:

If you publish in surgical journals, note the [Consensus Statement on Authorship that several surgery journals follow](#). There is also a [Consensus Statement by these same journal editors](#) on adoption of the COPE (Committee on Publication Ethics) guidelines for addressing authorship issues:

As an author publishing in a journal that follows the COPE guidelines, *you may want to know what to expect, should a problem arise*.

Additional references to read now or refer to in the future:

- [Annesley TM. Passing the Paternite´ Test. Clinical Chemistry 2011;57:9 1239–1241.](#)
- [Albert T, Wager E. How to handle authorship disputes: a guide for new researchers.](#)

Ghostwriting

Articles drafted (or ghosted) by industry with minimal involvement from “guest” authors seem to be in the news on a regular basis. Most medical journals have tightened their policies requiring authors to disclose industry funding and writing assistance. According to UCSF policy, *“faculty, staff, students, and trainees are prohibited from publishing articles that are substantially or completely “ghost” written by industry representatives”*.

To learn more, see the following:

- [Frequently Asked Questions about Medical Ghostwriting Project on Government Oversight](#)
- [The Corporate Coauthor](#)
Adriane Fugh-Berman, J Gen Intern Med. 2005:
- [The Haunting of Medical Journals: How Ghostwriting Sold “HRT”](#)
Adriane J. Fugh-Berman, PLoS Med. 2010:
doi: [10.1371/journal.pmed.1000335](https://doi.org/10.1371/journal.pmed.1000335)

E. PUBLISHING AND PEER REVIEW

How the peer review process works at the journal and how to communicate with journal editors:

- [Annesley T. Top 10 Tips for Responding to Reviewer and Editor Comments. Clinical Chemistry 2011, 57:4, 5510-554:](#)
- [Werb Z., Siegal V. How to Read and Respond to a Rejection Letter. Career Advice for Life Scientists, Vol II, chapter 4, pp 156-160. Free PDF available from the American Society for Cell Biology \(The other volumes look great too!\)](#)

How to be a good peer reviewer:

- Annesley T. Seven Reasons Not to Be a Peer Reviewer—And Why These Reasons Are Wrong. *Clinical Chemistry* 2012, 58:4, 677-679:
- Annesley T. Now You Be the Judge. *Clinical Chemistry*, 2012, 58:11, 1520-1526:
Hoppin FG, How I Review an Original Research Article. *Am J Respir Crit Care Med* 2002,166:8, 1019-1023. DOI: [10.1164/rccm.200204-324OE](https://doi.org/10.1164/rccm.200204-324OE)
- Benos DJ et al. How to Peer Review a Paper. *Adv Physiol Educ* 2003, 22:7, 47-52:

Be aware of “predatory open access publishers”

Academic scientists frequently receive email invitations to publish their work and/or serve on editorial boards for journals they’ve never heard of. I suggest being careful about agreeing to do either because many are operated by scholarly vanity presses, essentially a scam in which “publication” in a bogus open access journal takes place, often without any actual peer review, in exchange for author fees. The more articles such predatory publishers publish, the more money they make. These publishers are abusing the “legitimate” open access publishing system, which involves author or institutional fees, but does so with full peer review. To [learn more \(and to see a listing of predatory publishers\)](#) - also see [UCSF Library information](#). If you aren’t sure about an “invitation” please feel free to a UCSF librarian for help (link is on that same page) or ask me!

F. GRANT PROPOSALS

A successfully funded proposal is far more than a piece of writing. It’s often the culmination of months of preparation. There’s quite a learning curve, so it’s well worth spending a few hours reading about the grant writing and review process. You will save yourself time and grief. I *highly* recommend the resources listed here, but be sure to refer back to part C of this Guide when it’s time to revise your prose.

WATCH:

Northwestern University’s Bioscience Program:

<http://www.northwestern.edu/climb/resources/written-communication/nih-grant-and-dissertation-proposals.html>.

The link takes you to videos that will give you guidance about how you should approach writing key sections of such proposals. Two videos are devoted to the all important aims page.

ATTEND:

The Department of Surgery’s Scientific Writing Course includes sessions on writing grant proposals.

Workshops for Residents on grant writing are given annually.

UCSF’s Office of Career and Professional Development hosts a workshop series on grant writing, a session devoted to NIH NRSA (fellowship) grants, and a “Preparing Future Faculty” series throughout the year. [Sign up on their listserv](#) to receive announcements about their excellent events.

UCSF [offers a course for writing an NIH K \(mentored\) grant, for faculty considering doing this](#). A previous course on K grants had resources I *highly recommend* that are still available under “Archived Presentations and Examples”: [PowerPoints and Examples](#)

READ:

Excellent articles for understanding the grant process from beginning to end:

- Devine, EB. The art of obtaining grants. *Am J Health-Syst Pharm* 2009; 66:580-587.
- Chung, KC and Shauver MJ. Fundamental principles of writing a successful scientific grant proposal. *J Hand Surgery* 2008; 33A, 566-572.

- Berger, DH. An introduction to obtaining extramural funding. *J Surgical Research* 2005;128: 226–231.
- Brock MV and Bouvet M. Writing a successful NIH mentored Career Development Grant (K Award). *Annals of Surgery*, 2010; 251: 1013-1017.
- Berg KM et al. Demystifying the NIH Grant Application Process. *J General Internal Med* 2007; 22: 1587-95.

For NIH grants specifically, I recommend this resource that has detailed tips and examples for preparing a new NIH proposal:

- [The Grant Application Writer’s Workbook: Guide to A Successful Proposal, National Institutes of Health.](#)

Essential article for writing clinical proposals: (includes several real examples—clinical examples are very hard to locate so that’s why this article is “essential”):

- Inouye SK and Fiellin F. An evidence-based guide to writing grant proposals for clinical research. *Ann Intern Med* 2005;142:274-282

Within the NIH itself, I’ve found the best materials come from one institute—the NIAID—but these materials are useful for all researchers, regardless of whether the NIAID is where you’ll be sending your proposal.

UCSF’S CTSI offers [proposal libraries](#), [resources for developing NIH K proposals](#), [NIH diversity supplement awards](#), and [much more](#).

FIND EXAMPLES:

The best examples come from mentors and colleagues who are willing to share their successful proposals with you, but two additional sources can be helpful:

- [Examples of NIH K08, K23 and K24 grant applications](#)
- [Examples of NIH RO1s, RO3s, R21s, and more](#)

Plagiarism is not allowed in grant proposals and the cost can be high. Follow the advice given here:

- [Markin K. Plagiarism in Grant Proposals](#)

CONTACT SURGERY’S RESEARCH ADMINISTRATOR:

All applications for extramural funding (= from outside of UCSF, so NIH definitely falls into this category) must be formally reviewed and approved by the Department Chair and by an official in UCSF’s Office of Sponsored Research (OSR). Therefore, as soon as you think you’d like to submit a research proposal, contact a Research Services Coordinator in the OSR who works with the Department of Surgery. The personnel below may change, but as of this writing:

For the Division of Cardiothoracic, Vascular, or Transplant Surgery, contact Mayumi Cutler mayumi.cutler@ucsf.edu.

For any other Division within Surgery, contact Paul Tang Paul.Tang@ucsf.edu.

Paul or Mayumi will assist you in completing all administrative (as opposed to scientific) components of your application and will read the agency guidelines and let you know exactly the sections you will need to complete for your application and which sections they will complete for you. They will also complete all internal forms,

obtain approval signatures, make copies of hard-copy submissions and submit your final application for UCSF's Internal Review (formerly known as the Office of Contracts & Grants) or directly to the funding agency. *They will make the process much clearer for you, will give you a timeline to follow, and can help you from becoming overwhelmed, so please get in touch with them!*

You can learn more by viewing [Pre-award Guidance & Deadlines](#) and [PowerPoint Slides on Working with UCSF Research Administration](#) on the Publications Office Website for more information.

G. SCIENTIFIC TALKS AND POSTERS

Scientists have all sat through many boring talks that start off with a laptop malfunction, are punctuated by repeated use of "um", and "illustrated" by copious illegible slides. Powerpoint isn't the only culprit, but certainly works here to tank Lincoln's Gettysburg Address: <http://norvig.com/Gettysburg/>. To deliver an effective talk, you'll need to...

READ AND WATCH

- Designing Effective Presentations (Excellent 42-minute video covering how to design PowerPoint slides and structure the talk itself)
Susan McConnell, Stanford University
<http://www.youtube.com/watch?v=Hp7ld3Yb9XQ>
- How to Give a Scientific Talk (short article, great sense of humor and great advice)
Andrew Murray, Harvard Medical School
https://pages.wustl.edu/files/pages/imce/haswell/how_to_give_a_science_talk.pdf
- Career Development Guide: Communicating Science-Giving Talks (64-page guide)
Burroughs Wellcome Fund
<http://www.bwfund.org/pages/361/Career-Development-Guide---Communicating-Science--Giving-Talks/>

PRACTICE

To deliver a research talk that has a clear message and will engage your audience, [sign up to give a "practice talk" and get feedback from UCSF's Career and Professional Development Program](#), or [download materials you can use to practice in your own group](#).

POSTERS

Get excellent tips from [UCSF's CTSI](#): and from [UCSF's Career and Professional Development Program](#).

H. CVS AND PERSONAL STATEMENTS (RESIDENTS & POSTDOCS ONLY)

If you need help preparing your CV and personal statement to apply for a fellowship position (residents) or faculty position (postdocs), you can find many examples:

Residents: <http://career.ucsf.edu/medical-students/residency-search/cvs-resumes-cover-letters>

Note that these samples are really geared for medical students, so you definitely have to tweak things accordingly.

Examples from the United States Medical Licensing Examination (USMLE):
http://www.usmleweb.com/sample_personal_statements.html

The Weill Cornell School of Medicine has a guide for fellowship applications (not for surgery, unfortunately, but the general principles and examples seem very helpful and there's advice about CVs. Pp 40-41):

http://medicine.weill.cornell.edu/sites/default/files/2016fellowshipguide_2.pdf

Postdocs: <http://career.ucsf.edu/grad-students-postdocs/career-planning/academic-jobs/applying/academic-samples>.

I. EDITING HELP AND WRITING COURSE

Editorial Review

Department of Surgery faculty, postdoctoral fellows, and residents can ask for [editorial review of manuscripts and grant proposals \(and sometimes other projects, by arrangement\)](#). Editing can take place early in the process and several times, as needed, to help you create the final polished product. If you prefer working one-on-one in person, that can be arranged.

Scientific Writing Course

The Department of Surgery's Scientific Publications Office [offers an intensive scientific writing course twice a year](#).

Faculty can request a special workshop for their lab or research group on specific writing or publishing topics.

For questions about this writing resource guide, further resources, or other scientific writing and publishing-related matters, contact me: Pamela.Derish@ucsf.edu (Tel. 415.885-7686)

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