The Write Stuff
Advice on writing grants and research articles from the Research Medical Library

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Making Cancer History®

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In this issue...

How to discuss your study's limitations effectively

– *Joe Munch*

In writing a scientific manuscript, discussing the limitations of your study provides readers with the information they need to better understand and appreciate your findings. It also shows readers—particularly reviewers—that you are aware of the limitations. Here is how to discuss the limitations of your study in a way that anticipates and blunts reviewers' criticisms of your work and demonstrates that you are a knowledgeable, adept researcher in your field.

Address your study's limitations in a concise paragraph near the end of the Discussion section. Making this paragraph the second-to-last paragraph of the Discussion—placed immediately before a concluding paragraph that reiterates your findings' positive implications and describes how the study enables future research—will help ensure that the study's drawbacks are not the last thing reviewers read in the paper.

Start this "limitations" paragraph with a simple topic sentence that signals what you're about to discuss. For example:

> "Our study had some limitations."

Then, provide a concise sentence or two identifying each limitation and explaining how the limitation may have affected the quality of the study's findings and/or their applicability. For example:

> "First, owing to the rarity of the patients' disease, the study had a small sample size and thus may have been insufficiently powered to detect a meaningful survival difference between the treatment groups."

In discussing your study's limitations, identify only those that most obviously affected the rigor of the research or the robustness of the results. Whereas discussing these principal limitations will build reviewers' trust in you and your research, discussing every drawback, no matter how small, can give the impression that the study is irreparably flawed.

For each limitation you identify, provide a sentence that refutes the limitation or that provides information to counterbalance or otherwise minimize the limitation's perceived impact. You can cite previous studies to help substantiate your assertions:

> "However, this small sample represents the largest of its kind to date, which means that our study likely provides the clearest picture of this patient population's survival outcomes after the treatments described. Indeed, the sample size of our study was nearly twice that of the study by Clark et al.,[23] whose findings have largely informed the care of this population for the last decade."

Reviewers will likely understand the nature and impact of certain types of limitations. Although you don't need to explain these types of limitations, you should address them nonetheless:

> "The study also had the limitations inherent to any retrospective study. However, given the extreme rarity of the disease, a prospective study of this population was infeasible."

Providing a statement reiterating your study's particular strengths can remind reviewers of the value of the study's findings. Explaining how future studies might eliminate or overcome the limitation can also help reassure reviewers of the study's merit; even better is to say how you, specifically, are already taking steps to address the limitations:

> "Finally, because our study included only patients with this rare disease, its findings likely are not widely applicable beyond this population. Despite these potential limitations, our study provides the strongest insight yet into effective treatment options for this population. To improve further upon these findings, we are now collaborating with other institutions to enroll additional patients in a prospective trial."

Reference letters vs. letters of support for NIH grant applications: What's the difference?

– Ann Sutton

Both reference letters and letters of support provide vital information that can support researchers on their career paths. However, their purpose, audience, and content differ.

Reference letters are used to recommend individuals for fellowship programs and career development awards.

Letters of support are submitted as part of grant applications and are used to describe the support and commitment that the applicant will be receiving from his or her colleagues or institution (e.g., experimental animals, reagents, clinical samples, or the use of Core Grant facilities). Letters of support help to increase the credibility of the applicant's proposal.

Reference letters

Reference letters should be written by individuals who are familiar with you and your academic or work performance and career plans. They are commonly written by mentors, professors, and senior colleagues.

When requesting reference letters, choose people who know you well and who can personally attest to your skills and qualifications. Make the request as early as possible to give the person time to craft an excellent letter—do not wait until shortly before the application is due. Be sure to provide the individual with a summary of your research, a copy of your CV, and all of the necessary instructions and deadlines pertaining to the application.

If you are asked to write a reference letter for an NIH fellowship or career development award, first check the specific instructions on the NIH website. As you write your letter, remember that it is important to convey enthusiasm for the applicant and his or her work. Be sure to include specific and quantifiable details about the individual's past research and academic experience, as well as any positive personal attributes that are relevant to the application (e.g., demonstrating initiative or assisting others). Describe the merits of the applicant's proposed research project and how the award will further his or her research and career. You may find it useful to seek input from other colleagues who have worked with the individual. If you have recommended other people whose applications for the same type of award were successful, briefly describe their most significant accomplishments since receiving the award.

Note that the NIH requires 3-5 reference letters for fellowships and career development awards. These documents are submitted via eRA Commons; their content is never seen by the applicant.

Letters of support

Letters of support should be written by individuals who will be making direct and substantive contributions to your project (e.g., consultants) or individuals who can attest to the institution's resources and commitment (e.g., the head of a Core Grant facility).

When requesting a letter of support, provide the writer with a copy of your resource agreement, if applicable, and the deadlines and requirements for letters of support. You may find it useful to draft the letter yourself and have the person sign it; this ensures that all of the appropriate information is included and that the letter is returned quickly.

When writing a letter of support for an NIH grant proposal, first check the guidelines and instructions in the NIH Application Guide or the specific funding opportunity announcement. Begin the letter by expressing your enthusiasm for the project and the investigator. Next, specify your role on the project and describe your expertise and resources. You should also mention whether you have collaborated with the applicant previously and whether you expect to be named as a co-author on any resulting research papers. As noted in the instructions (linked above), if you will be providing materials or the use of facilities, state whether there is a fee for their use. Specify whether any materials will be supplied only to the applicant or whether they

are available to anyone upon request; this will help reviewers determine whether any conflict of interest is present. If you will be serving as a consultant, list your rates and the number of hours you expect to spend on the project.

Individuals applying for NIH funding should submit as many letters of support as needed to illustrate all of the substantive assistance that they will be receiving on the project. While the NIH has no limit on the number of letters that can be submitted, applicants should always be mindful of the reviewers' time. Letters of support are submitted with all of the other grant application documents and can be seen by anyone.

A note about conflict of interest

When requesting reference letters and letters of support, always keep potential conflicts of interest in mind. The authors of your letters cannot also serve as reviewers. Remember that conflicts of interest also extend to family members. For more information, please see Managing Conflict of Interest in NIH Peer Review of Grants and Contracts.

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NCI Bottom Line blog offers insight into grant funding and budgets

– Sunita Patterson

Interested in an inside look at the National Cancer Institute's grant processes, funding decisions, and budget issues? A new blog on these topics, NCI Bottom Line, was launched in September 2019. The blog was started to provide clarity and transparency on "budget- and

funding-related milestones, funding trends and patterns, emerging policy or fiscal issues, and analysis of our grants portfolio," said Doug Lowy, MD, NCI Acting Director, in the first post.

Thus far, there has been one post each month. Topics have included increased paylines for fiscal year 2020, a recommendation for a new policy requiring a minimum level of effort by PIs on certain types of grants, and the proposed budget and priorities for fiscal year 2021. In the latest post, former MD Anderson senior vice president Oliver Bogler, PhD, who became the director of NCI's Center for Cancer Training in January, offered suggestions to cancer research trainees on navigating this challenging COVID-19 period. You can click the blog's "Subscribe" link to receive email notifications of new posts.

Dissertations, Text Recycling, and Self-Plagiarism

– David Farris

There is much debate about the ethics and legality of using portions of text from one's dissertation as a basis for an article manuscript. Reusing one's own text is frequently referred to as "text recycling" or "self-plagiarism." However, there are subtle differences between the two terms. Cary Moskovitz, Director of Writing in the Disciplines at Duke University, has written extensively about text recycling (1) and defines it as:

> the reuse of textual material (prose or visuals) from one document in a new document where (1) the material in the new document is identical to that of the source or substantively equivalent in both form and content; (2) the material serves the same rhetorical function in both documents; and (3) at least one author of the new document is also an author of the prior document (unless the source contains a statement explicitly granting permission for its contents to be recycled).

In contrast, the Committee on Publication Ethics (COPE) states that self-plagiarism occurs when an author copies significant portions of text from their *previously published works* (2). This raises a couple of questions. Are dissertations published works in the same sense that articles published by journals are? Are dissertations protected under U.S. copyright law? As with all issues regarding intellectual property, copyright protection, and publishing, the answers are complicated.

Many PhD-granting institutions require candidates to submit their dissertations to a repository. Some institutional repositories are maintained by a university (e.g., DASH, Harvard University's repository for dissertations and other scholarly works written by Harvard faculty and students), and some are for-profit (e.g., ProQuest Dissertations and Theses). Dissertations are classified as "grey literature," or works "produced on all levels of government, academics, business and industry in print and electronic formats, but which [are] not controlled by commercial publishers" (3). Dissertations are not usually commercially published, although some for-profit repositories assign dissertations an International Standard Book Number (ISBN). People often assume that having an ISBN means that a work has been published, but the ISBN is only a product identifier; any publicly available monograph can be assigned one (4).

According to Section 102 of the Copyright Act of 1976:

> Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they

can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device (5).

Thus, scholarly works such as dissertations are automatically protected by copyright once they exist in print, digital format, or any other medium that may be developed in the future. So, the question remains: Can you use your copyright-protected but not commercially published dissertation as the basis for a published article? The answer is that it is probably okay to do so, but to be on the safe side, check with the publisher you plan to submit your manuscript to. According to Dr. Bill Mattox, Associate Dean of Graduate Education at The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, journals typically accept text that was previously "published" in a dissertation, and they will usually grant students the right to use the material they have published in the journal in a future dissertation. However, each publisher has its own policies regarding text recycling and what constitutes self-plagiarism. Authors should always check the author guidelines provided by the journal, and if the information there seems vague, contact the journal directly.

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NIH increases the use of Notices of Special Interest

– Stephanie Deming

The NIH has increased the use of Notices of Special Interest, or NOSIs, to notify the scientific community about areas of special interest. In an interview at the end of January on the NIH's *All About Grants* podcast (1), Jodi Black, Deputy Director of the NIH's Office of Extramural Research, explained why the NIH is using NOSIs more frequently and outlined the benefits of NOSIs.

According to Black, previously, when the NIH wanted to notify the scientific community that an NIH Institute or Center was especially interested in a specific scientific area, the NIH would publish a Program Announcement (1). Program Announcements typically are very long and contain extensive detail about eligibility requirements, application format, etc. In contrast, NOSIs are very short. NOSIs list key dates, indicate the related existing Funding Opportunity Announcement(s) that applicants should use when applying (in a section titled Related

Announcements), explain the scientific area(s) of special interest, and end with key contacts. See, for example, the NOSIs "Advancing Cancer Data Repositories and Knowledgebases" and "NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19)," both published April 9, 2020. A filter is available in the NIH Guide for Grants and Contracts that allows one to limit search results to NOSIs.

Black strongly emphasized that applicants must put the NOSI number in the appropriate box of the SF424 (R&R) form (box 4.b as of this writing) to ensure that an application is considered for funding under the NOSI.

Because NOSIs are short, they allow potential applicants to quickly read about new areas of special interest. Another benefit of NOSIs is that they are not subject to the lengthy agency approval process required for Funding Opportunity Announcements, which means that the NIH can use NOSIs to quickly alert the scientific community to new funding priorities (1).

You can learn more about NOSIs in a 5-minute video published April 1 as part of the NIH Grants Administration Take 5 series.

Reference

1. Notices of Special Interest (NOSIs). Interview with Jodi Black, Deputy Director of NIH's Office of Extramural Research. Transcript. *All About Grants.* National Institutes of Health. January 31, 2020. Accessed February 3, 2020. https://grants.nih.gov/podcasts/All_About_Grants/episodes/Transcript-NOSIs-Final.htm

Tips for using Track Changes in Microsoft Word

– Bryan Tutt

The "Track Changes" tool in Microsoft Word allows readers to see what edits have been made to a document and which user made which edits. Edits appear with distinctive formatting—by default, added words appear as underlined text, deletions appear as strikethrough text, and both are in a different color than the original text—making them stand out. The tool is useful for authors of scientific manuscripts and grant proposals because authors can review changes made by co-authors and editors and accept or reject each change individually. Below are some tips for using Track Changes in Windows PCs. Tips for Mac users are available here.

Tracking changes

To use Track Changes in a Word document, click "Review" on the toolbar at the top of your screen. You'll see a "Tracking" section with the Track Changes icon (a sheet of paper with red marks and a pen). Clicking the icon turns on Track Changes, meaning that any new changes you make to the document will be tracked. Clicking the icon again turns off the feature. To make sure your name is applied to any changes you make, click the dialog box launcher (a small, square icon with an arrow) next to "Tracking." In the dialog box, select "Change User Name," and you can enter your name if it does not already appear in the "User Name" box.

Also in the “Tracking” dialog box is an “Advanced Options” box. This menu allows you to change the color of tracked changes; for instance, you might decide to display insertions and deletions in different colors or to show changes by different users in different colors. Another useful feature in the “Advanced Options” menu is the “Track Formatting” box. This box is checked by default, meaning that any formatting change (e.g., font changes, using the Tab key to indent a paragraph) will be noted with a comment box in the right margin. Turning off this feature avoids cluttering the margin with such notifications. However, tracking formatting changes can be useful if you want other users to be aware of specific formatting changes, such as italicizing gene names.

An adjunct to Track Changes is the Comment tool. The “Comments” section of the “Review” toolbar appears to the left of the Tracking section. The “New Comment” icon allows users to type comments that appear in boxes in the right margin. Your user name will appear above any comments you add.

Reviewing tracked changes

To review changes made by other users, first go to “Tracking” on the “Review” toolbar. To the right of the Track Changes icon, you’ll see three drop-down menus that allow you to customize your view. The top menu allows you to view the text as “Simple Markup,” “All Markup,” “No Markup,” or “Original.” The Simple Markup setting makes edited text appear the same as original text, but lines appear in the left margin where edits have been made and comments are visible in the right margin; the All Markup setting (the default setting) shows all tracked changes in color and in strikethrough or underscore font; the No Markup setting shows the text as it would appear if all the tracked insertions and deletions were accepted; and the Original setting shows the text as it appeared before tracked changes were made. The “Show Markup” menu allows you to see or hide comments, insertions and deletions, and formatting changes. You can also choose whether revisions and comments appear inline or in balloons (the default is for revisions to appear inline and comments to appear in balloons) and which users’ revisions and comments you can see (the default is all users). Note that the “Show Markup” menu affects only your view; anything you choose to hide from view remains in the document and will be visible when these settings are changed. Finally, the “Reviewing Pane” menu allows you to see all revisions and comments in a panel on your screen.

To accept or reject tracked changes, you can use the “Accept” and “Reject” icons in the “Changes” section of the “Review” toolbar, which appears to the right of the “Tracking” section. Each of these icons has a drop-down menu that allows you to accept or reject each change and move to the next. The menus also allow you to accept or reject all changes in the document (or in a section of text that you have selected) at once, but this function should not be used unless you have carefully reviewed the changes. You can also accept or reject each change individually by right-clicking on it; a menu will appear with your options. Finally, you can right-click on a comment to view editing options, which include deleting it or typing a response.

Please note that the menu options described above apply to the newer versions of Microsoft Word (e.g., Word for Office 365, Word 2019). For more information on using Track Changes, visit Microsoft Office Support. Tips on using Track Changes in older versions of Word are available in the Autumn 2006 issue of *The Write Stuff*.

Editing services

Scientific Publications, Research Medical Library, is here to help MD Anderson faculty and trainees get published and get funded. We provide a wide range of editorial, educational, and publishing services, free of charge, to the MD Anderson community, including

- editing grant proposals and research articles;
- editing book chapters (as workload permits);
- providing one-on-one consultations with authors at any stage of the writing process;
- teaching workshops and giving lectures on writing research articles and grant proposals;
- teaching scientific English for non-native speakers;
- providing writing advice and support, including online writing advice.

For more information about our editing services and how to use them, please visit Our Editing Services, or contact us at scientificpublications@mdanderson.org.

Upcoming events for authors

Please see the Scientific Publications website for more information on our educational courses.

Webinars Presented by Scientific Publications. Scientific Publications continues to host a series of webinars on various topics. Webinars previously presented and recorded by Scientific Publications are available here. Links to upcoming webinars will be posted as they become available on the Research Medical Library and Scientific Publications websites.

One webinar is currently scheduled:

> **Tackling the Writing Process – May 12, 2020, 11:00 – 11:30 am**
>
> In this webinar, Don Norwood, a scientific editor in Scientific Publications, Research Medical Library, will explain how to get started on a writing project and how to keep from getting stuck once you begin writing. To join the webinar, click here at the appropriate time and log in as a guest.

Tool Time Tuesday with the Research Medical Library. In this WebEx series, our librarians, editors, or special guests from around the institution discuss at least three tools, resources, or services available for MD Anderson faculty, staff, and students. These discussions include technology tools, apps, and more to help you in your work.

Presentations run every Tuesday from 10:00 to 10:30 am and are currently scheduled through June 2. Click here to register and to receive the handout and a link to the archived recording after the event.

Writing and Publishing Scientific Articles (WAPSA). WAPSA is a structured, practical, in-depth writing-education program for postdoctoral fellows and clinical trainees at MD Anderson taught by Scientific Publications, Research Medical Library. This workshop, offered either in person or via WebEx online, provides an excellent opportunity for advancing participants' skills in writing and publishing research articles while developing their in-progress manuscripts under the guidance of scientific editors.

Locations and times to be announced. Registration is required through Scientific Publications, Research Medical Library. Details: John McCool (scipubseducation@mdanderson.org), 713-792-3174.

Short Courses in Scientific English for Non-Native Speakers of English. Courses last 7 weeks and meet twice a week for 1 or 1.5 hours each day. Classes are held early in the morning, during the lunch hour, or late in the afternoon. Classes are free of charge. Participants must speak English at the intermediate or higher level and be familiar with research and general biomedical terminology.

Locations, times, and classes to be announced.

Details: Mark Picus (mapicus@mdanderson.org), 713-792-7251, or John McCool (scipubseducation@mdanderson.org), 713-792-3174.

Friday Conversation Group. The Friday Conversation Group, offered either in person or via WebEx online, provides an informal atmosphere for non-native speakers of English to practice their conversational abilities, learn more about American culture, and meet new friends.

Locations and times to be announced. Details: Mark Picus (mapicus@mdanderson.org), 713-792-7251, or John McCool (scipubseducation@mdanderson.org), 713-792-3174.