

TEN TIPS FOR WRITING CHALLENGE GRANTS

The NIH Challenge Grants are very different from other current NIH grants. We have no sample Challenge Grants, but the UTHSC-H Office of Research and Center for Clinical and Translational Sciences have compiled 10 suggestions on how to choose the right Challenge Grant Topic, write your Challenge Grant Research Plan, and handle a few other “challenging” aspects of these proposals.

1. Read the Challenge Grant RFA (<http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-09-003.html>), the Challenge Grant web page (http://grants.nih.gov/grants/funding/challenge_award/), and the Challenge Grant Frequently Asked Questions (http://grants.nih.gov/recovery/faqs_challenge.html).

2. Confirm that your project fits a specific Challenge Area and Challenge Topic.

The Challenge Grant RFA (<http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-09-003.html>) has a list of Areas and Topics. If you have any doubts about whether your study is applicable to a specific Topic, call or email the NIH program officer listed for that Topic in the RFA. For example, see this Topic description:

“01-AA-101* Identifying Phenotypic Markers for Positive Behavior Change. Identify reliable, robust intermediate phenotypic markers (using cognitive neuroscience and behavioral economics) that can be used to personalize approaches to support positive health behavior change in the near term. Examples include behavioral disinhibition, delay discounting, heart rate variability and implicit cognition. Contact: Dr. Mark Willenbring, 301-443-1208, mlw@niaaa.nih.gov”

This Topic is being supported by the NIAAA, the National Institute for Alcoholism and Alcohol Abuse, as revealed by “niaaa” in the email address (for a list of all NIH institute abbreviations, see <http://www.nih.gov/icd/index.html>) and “AA” in the opportunity number (see http://grants.nih.gov/grants/acronym_list.htm#ao_two for a list of these 2-letter codes). Dr. Willenbring is the program officer for this opportunity at NIAAA. If your study is not directly related to alcoholism and alcohol abuse, it may or may not be applicable for this opportunity. Call or email to Dr. Willenbring to find out. Don’t depend solely on the Topic descriptions, as many of them are very short. (Also, the * after the opportunity number indicates that the Topic is of major importance to the institute, which may affect funding decisions.)

3. Remember the budget limitations. Challenge Grants are 2-year grants for up to \$500,000 total costs per year, meaning that your entire grant could be \$1M. But be realistic—the reviewers will know if you’re asking for more money than you need. Also note that the \$1M is total costs, meaning that the university’s required indirect costs are counted in the \$1M too.

4. Keep the intent of the Challenge Grant Program in mind. All Recovery Act programs are aiming to increase jobs or preserve existing jobs, so be sure to emphasize in your Research Plan how your study will do that. A main focus of the Challenge Grants is to generate important findings in 2 years, so in your Research Plan, also make a strong case that you can answer an important research question in 2 years.

5. If your proposal concerns comparative effectiveness research (CER), make sure that it adheres to the definition of CER in the RFA: “evaluating, examining or analyzing either treatments or interventions to develop the best scientific evidence, most effective diagnostic tool, treatment or intervention or the most cost-effective approach. The goal of CER is to maximize the likelihood that beneficial treatments and interventions are employed in healthcare practice; harmful treatments are not used, to reduce costs and/or improve cost-effectiveness, and to provide an explicit, fair, rational method of resource allocation while taking into account population characteristics. Hopefully, CER research findings may be incorporated into evidence-based practice guidelines, standards and other decision models for health care practice and policy.”

6. Follow the instructions for the Challenge Grant Research Plan. You will apply for this grant electronically, through Cayuse424 (see the RFA for instructions), which will ask you for the standard sections of an NIH Research Plan (the part of the grant that describes your study). However, the Challenge Grants have a very different format, which is described in the RFA (<http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-09-003.html>). Below we list the sections in a standard NIH grant (which you will be asked for in the electronic submission system), describe the comparable sections in a Challenge Grant, explain how to match them up during electronic submission, and offer some tips on how to write the sections. See the standard PHS 398 NIH grant instructions (<http://grants1.nih.gov/grants/funding/phs398/phs398.doc>) for more information on writing NIH grant proposals.

Title. Because many, many people will be applying for Challenge Grants, create a clear and interesting title to interest the reviewers in your project as soon as they start to read your proposal. Remember, all NIH grant titles are limited to 81 characters and spaces

Project Summary/Abstract. Likewise, make sure your abstract clearly explains your project and emphasizes why it’s important. Your title and abstract are your sales tools for your study. Get the attention and support of the reviewers before they even read the Research Plan.

You must begin you Challenge Grant abstract with the Challenge Grant Area and Topic. For example:

“This application addresses broad Challenge Area (01) Behavior, Behavioral Change, and Prevention and specific Challenge Topic 01-GM-104 Mechanisms of Behavior Change Research.”

Introduction to Application. Omit; not required for Challenge Grants.

Specific Aims. One page maximum. Begin with a short paragraph describing the field, the gap in knowledge that your study will fill, and why it's important to fill that gap. Name the study population and any advantages you have ("... our clinics see X number of patients with X disease a year, more than any other clinics in the nation.."), including that as a UTHSC-H or M. D. Anderson researcher, you have access to the services of the Center for Clinical and Translational Research, which was funded by one of the first 12 CTSA grants. Then, state the Specific Aims. You can end with a sentence or two emphasizing how the study will improve health. In the electronic submission system, upload the Specific Aims section as a separate pdf.

Background and Significance. Omit; not required for Challenge Grants.

Preliminary Studies/Progress Report. Omit; not required for Challenge Grants. Information on preliminary studies can be included in the Research Design and Methods section.

Research Design and Methods. A maximum of 12 pages, with the following elements (make each a separate subsection in this document, which you will upload in the electronic submission system as a separate pdf).

Research Area: "State which broad Challenge Area (e.g., (01: Behavior, Behavioral Change, and Prevention) and specific Challenge Topic (e.g., *Mechanisms of Behavior Change Research: 01-GM-104*) will be addressed. Also include the project title on the first page."

Simply listing the Area, Topic, and your title should be sufficient.

The Challenge and Potential Impact: "What is the research opportunity, scientific knowledge gap or technology that will be addressed? How broad is the potential impact in science and/or health? Which community(ies) will be affected? What is (are) the size(s) of the community(ies)? Will the potential impact be major?"

As for the abstract, we recommend a brief description of the field, the gap your research will fill, the experiments and subjects you'll study, and the impact of the research. This section must make the reviewer so excited about the idea that he or she would fund it then and there, without reading the rest of the proposal. The emphasis should be on the importance of the study, as shown by the broadness of its effect on science and health and the size of the communities affected. The other information you include here is background to convince the reviewers that the study is indeed important. (You could also mention here how many jobs your project would create or preserve.) After you've drafted this section, reread it critically (or ask a colleague to read it) to make sure that it's clear and persuasive and doesn't raise any unanswered questions or doubts. This section could be as little as 1-2 pages.

The Approach: "How will you attempt to explore or solve the stated research problem? How will your rationale and/or approach overcome existing challenges or

barriers in the field? If you propose to improve existing technologies or to develop new technologies, which needs are being addressed and what is unconventional and exceptionally innovative about your approach? Provide enough information for reviewers to determine what you are proposing to do, but do not include a detailed experimental plan.”

Like a standard NIH grant Experimental Design and Methods section, The Approach could begin with a brief general statement of how you will address your research question and then follow with more specific information on how each Specific Aim will be achieved. (Each Specific Aim could be a subsection.) Unlike the standard Experimental Design and Methods section, The Approach should emphasize the overall experimental design rather than stating each step in each experiment, unless you are proposing new methods. Remember to mention that you have access to CCTS services (see <http://ccts.uth.tmc.edu/> for a complete description of CCTS services, and contact ccts@uth.tmc.edu for sample text describing use of the CCTS). As in all parts of the Research Plan, references should be cited to support facts. (The reference list is not counted in the 12-page limit.) This section may be the longest of the 12-page document, but if you need to shorten your document, shorten this section before you shorten The Challenge and Potential Impact section.

7. Consult the RFA for instructions on the other parts of the proposal (budget, budget justification, biosketches, etc.).

8. Submit early. Many, many people will be submitting their proposals at the last minute, and the submission system may be overloaded. (Even if the NIH system crashes, your proposal will eventually be accepted, but you may have to closely watch the system for a few days after the deadline, when you would probably rather be recovering from writing the grant.) Also, we believe that early submissions may be more thoroughly addressed by NIH and may be assigned to more relevant study sections. These grants will be reviewed by special interest panels rather than standing study sections, and so early submissions may go to the most knowledgeable reviewers.

9. Don't be discouraged if you're not funded. NIH has stated that it may fund only 200 non-CER Challenge Grant proposals, but the number may increase. Also, if you've designed a good study, you can probably fund it through other grant mechanisms. Consult the CCTS after the Challenge Grant flurry for more assistance.

10. Questions? Call Maureen Goode at the CCTS (713-500-7924).