



# Tips and Guidelines for an NIH Proposal

## FORMAT SPECIFICATIONS

All file attachments must be in PDF format, and should have descriptive filenames of 50 characters or less, using only standard characters. All individual files or components of an NIH proposal must adhere to the following specifications:

Font must be Arial, Helvetica, Palatino Linotype, or Georgia, 11 points or larger, and black. Symbol fonts may be used to insert Greek letters or other special characters, but the font size requirement still applies. Smaller type may be used for figures, graphs, diagrams, charts, tables, figure legends, and footnotes: but it must be legible and all text must be in black. Colors can be used in figures.

Paper must be standard size (8.5 x 11 inches), with margins of at least one-half inch on all sides. No information should appear in the page margins, including page numbers (NIH will generate page numbers when the proposal is assembled in the eRA Commons after submission).

## PAGE LIMITS

The standard page limits for most NIH proposals are as follows. Please note that individual funding opportunity announcements (FOAs) may contain different guidelines that modify or supersede the standard rules. *Be sure to check the requirements listed in the FOA for the competition for which you are applying!*

Section	Page limit
Introduction ( <i>only</i> for resubmissions/revisions)	1
Specific Aims	1
Research Strategy	6 R03, R13, R21, R36, R41, R43 applications
	12 R01, R10, R15, R18, R21/R33, R24, R25, R33, R34, R42, R44 applications
Biographical Sketches	4
Appendices	<b>See FOA; most publications no longer allowed; neither are photos or color images of gels, micrographs, etc.</b>

## NAMING AN NIH PROPOSAL

You should give your proposal a brief descriptive title. NIH truncates titles after 81 characters (including spaces), so try to keep the title brief—or else put the important information first. Note that new applications must have different titles from any other project you have previously submitted. A resubmission or a renewal application should normally be given the same name as the previous grant or application. However, if the specific aims of the project have changed significantly, choose a new title. Revision applications must have the same title as the currently funded grant.

**ELEMENTS OF AN NIH PROPOSAL****1. Cover Letter**

Cover letters are not required (except for late applications or when submitting a corrected/changed application after the submission date), but OSP strongly recommends including one with every proposal you submit to NIH. Cover letters will not be shared with peer reviewers. You should include any of the following information that is relevant to the application:

- a. Application title
- b. Funding opportunity (PA or RFA) and title of the NIH initiative
- c. Request(s) for assignment/referral to a particular institute or center for funding consideration or Scientific Review Group (SRG). NIH is not obligated to grant these requests, but will consider them.
- d. List of individuals (i.e., competitors) who should not review the application and why.
- e. Disciplines involved in the proposed research, if multidisciplinary.
- f. Explanation of any subaward budget components that are not active for all periods of the proposed grant.

To facilitate consideration of your requests, the Division of Receipt and Referral (DRR) of the Center for Scientific Review (CSR) suggests that you list one request per line. If both institute/center and SRG review requests are made, place these on separate lines. If you are making positive (i.e., a request for referral to a specific SRG) and negative (i.e., a request that the proposal not be considered by a particular IC), make these requests on separate lines. Include the name of the IC or SRG, followed by a dash and the acronym. Do not use parentheses. Provide explanations for each request in a separate paragraph.

**2. Project Summary/Abstract**

The project summary is intended as a summary of the proposed activity suitable for public presentation or dissemination. It should contain a statement of objectives and methods to be employed, and should be written so as to be informative to other persons working in the same or related fields and, insofar as possible, to a scientifically literate lay reader. Do not include any proprietary or confidential information in the project summary, as it will be available for public viewing. This section is meant to serve as a succinct and accurate description of the proposed work, when separated from the application. This section cannot be longer than 30 lines of text.

**3. Project Narrative**

The project narrative is the second part of the project summary. It should address the relevance of the proposed research to public health in no more than two or three sentences. Write this section in plain language that can be understood by a lay audience.

**4. Bibliography/References Cited**

Provide a bibliography of any and all references cited in the research strategy. Each reference must include the names of all authors (in the same order in which they appear on the publication), the article and journal title, book title, volume number, page numbers (both starting and ending), and year of publication. Include only bibliographic citations.

If any of your own work was funded directly by an NIH grant or cooperative agreement active in fiscal year 2008 or beyond and was accepted for publication in a peer-reviewed journal on or after April 7, 2008, you must include the PubMed Central reference number (PMCID) at the

end of any citation of such works in any subsequent proposals to the NIH. See <http://publicaccess.nih.gov/> for further details about compliance with this policy.

## 5. Environment (formerly Facilities and Other Resources)

Information in this section is used to assess the adequacy of the organizational resources available to perform the proposed research. Identify the facilities to be used (laboratory, animal, computer, office, clinical, and other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity and extent of availability to the project. Describe only those resources that are pertinent to the proposed research. Provide any information describing other resources available to the project (i.e., machine shops, electronics shops, etc.) and the extent to which they would be available to the project.

Address how the research environment will contribute to the probability of success of the proposed research. Also note any unique features or resources that would contribute to the probable success of the research proposed. For an Early Stage Investigator, describe the institutional investment (start-up funding, course release, graduate assistants, etc.) in the success of the investigator.

## 6. Equipment

List major items of equipment available for the project, together with their location and pertinent capabilities, if appropriate.

## 7. Biographical Sketch

Use the sample format provided by NIH. Biographical sketches must be included for all Senior/Key personnel and other significant contributors. Biographical sketches may not ordinarily exceed four pages per person, including the table at the top of the first page in the sample. Complete the educational block at the top of the page, and also sections A, B, C, and D:

- a. *Personal Statement.* Briefly describe why your experience and qualifications make you particularly well-suited for your role in the project.
- b. *Positions and Honors.* List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any public advisory committee to the federal government.
- c. *Publications.* Do not include manuscripts submitted or in preparation (manuscripts in press are acceptable). For publicly available citations, URLs or PMID numbers or submission identification numbers may accompany the full reference. (Note that the PMID number is required for any publications subject to the public access requirement discussed in the References Cited section above.) NIH now requires that publications cited in biographical sketches be limited to 15: your five most recent, your five best, and the five most relevant to the proposed research. List publications in chronological order.
- d. *Research Support.* List selected research projects (both ongoing and completed during the last three years, whether funded with federal or non-federal support). Begin with projects that are most relevant to the proposed research. Briefly indicate overall goals of the project(s) and responsibilities of the key person identified on the biographical sketch. **Do not include number of person-months or direct costs.** Don't confuse this section with the Other Support (current and pending support) section. C&P information is not required at proposal stage, but will be requested if NIH anticipates making an award. The Research Support section in the biographical sketch is to highlight your accomplishments as a scientist, together with those of your colleagues.

## 8. Personnel Justification

List all personnel, including names, number of person-months devoted to the project (academic, calendar, and/or summer), and roles on the project. Do not provide individual salary information.

## 9. Consortium Justification (if applicable)

Provide an estimate of total costs (direct plus F&A or overhead) for each year, rounded to the nearest \$1,000. List the individuals and/or organizations with whom consortium or contractual arrangements have been made, along with all personnel, including percent of effort (in person-months) and roles on the project. Do not provide individual salary information. Indicate whether the collaborating institution is foreign or domestic.

## 10. Introduction (if applicable)

Introductions are only allowed for resubmissions or revisions of previously submitted proposals. Use the introduction to describe the revisions made, and to respond to comments and criticisms presented by the peer reviewers of the previous proposal. If you disagree with any of these, explain why. Begin each text section of the Research Plan with a section header (e.g., Introduction, Specific Aims, Research Strategy, etc.). Do not use the numbers associated with these sections in the instructions, as your application may not include all of the sections.

## 11. Specific Aims

List succinctly the broad, long-term objectives and the goal of the proposed research. For example, to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology. This section is limited to one page.

## 12. Research Strategy

Depending on the type of application you are submitting, you are allowed either 6 or 12 pages for this section (see the table on the first page).

- a. *Significance.* Briefly sketch why this proposed research is significant. Identify gaps in current knowledge or practice which the project intends to fill. Does it address an important problem or critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the project's aims change the concepts, technologies, treatments, services, or preventative interventions that drive this field? State concisely the importance and health relevance of the proposed research by relating the specific aims to the broad, long-term objectives.
- b. *Innovation.* Does this proposed research challenge and seek to shift current research or clinical practice paradigms by using novel theoretical concepts, approaches, methodologies, instrumentation, or interventions? Are the concepts, etc., novel in only one field of research or in a broader sense? Does the work proposed include refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions?
- c. *Approach.* This is the old "Research Design and Methods" section. Describe the research design (briefly!), and the conceptual or clinical framework, procedures, and analyses to be used to accomplish the project's specific aims. Unless specified elsewhere, indicate how the data will be collected, analyzed, and interpreted, and any data-sharing plans, as appropriate. Describe any new methodology and its advantage(s) over existing techniques and practices. Describe any novel concepts,

approaches, tools, or technologies proposed. Discuss the potential difficulties and limitations of the proposed procedures, and alternative approaches to circumvent such limitations where feasible. Provide a tentative sequence or timetable for the project. If any procedures, situations, or materials may be hazardous to personnel, point them out and describe the precautions that will be exercised.

- i. Preliminary Studies (new). If this is a new proposal, provide an account of any preliminary studies done by the PD/PI that are relevant.
- ii. Progress Report (renewal/revision). If this is a renewal or a revision, provide the beginning and ending dates for the period covered since the project was last reviewed competitively. Summarize the previous application's specific aims and the importance of the findings. Provide a succinct account of published and unpublished results, indicating progress toward their achievement. Discuss any changes in the specific aims as a result of budget reductions. A list of publications, manuscripts accepted for publication, patents, and other printed materials will be included in a separate section; do not include this information in the Research Strategy.

### **13. Multiple PD/PI Leadership Plan (if applicable)**

For projects designating multiple PDs/PIs, a leadership plan must be included. The rationale for choosing a multiple PD/PI approach should be described. The governance and organization of the leadership team and the research project should be described, including communication plans, the process for making decisions on scientific direction, and procedures for resolving conflicts. The roles and administrative, technical, and scientific responsibilities for the project or program should be delineated for the PDs/PIs and for other collaborators.

If budget allocation is planned, the distribution of resources to specific components of the project or the individual PDs/PIs should be delineated in the Leadership Plan. In the event of an award, the requested allocations may be reflected in a footnote on the Notice of Grant Award.

### **14. Consortium/Contractual Agreements (if applicable)**

Explain the programmatic, fiscal, and administrative arrangements to be made between the applicant organization and the consortium organization(s). If consortium or contractual activities represent a significant portion of the overall project, explain why the applicant organization, rather than the ultimate performer of the activities, should be the grantee.

### **15. Letters of Support (if applicable)**

Attach appropriate letters from all individuals confirming their roles in the project. For consultants, letters should include rates or charges for consulting services. Letters of support are not needed for co-PIs or for personnel (such as research assistants) not contributing in a substantive, measurable way to the scientific development or execution of the project. Do solicit such letters from collaborators at other institutions, evaluators, consultants, etc., and anyone not at NIU or in another department/college at NIU who is agreeing to support the project in a substantial, measurable manner. Letters should contain specific commitments and be as descriptive as possible. Letters from colleagues "in support" of the proposal should not be submitted.