Division of Sponsored Programs Administration

Guidance for Reviewing and Understanding Proposal Solicitations: Following sponsor guidelines for proposals and awards

External funding sponsors maintain their own guidelines and instructions for preparing and submitting proposals and for administering a project after an award is received. It's important to understand and follow all of these guidelines and requirements.

Proposal guidelines:

Instructions from the sponsor for preparing and submitting a proposal are commonly referred to as guidelines. They also may be called a Funding Opportunity Announcement, Program Announcement, Request for Application (RFA), Request for Proposal (RFP), Broad Agency Announcement (BAA), or Solicitation.

Regardless of what the instructions are called, they provide important information that is critical to read and understand. Some sponsors will return proposals without review if there are deviations between what was submitted and what the guidelines stated had to be submitted.

Solicitation numbers or opportunity announcement numbers may be provided to identify the program. If a PI contacts DSPA Pre-Award about a solicitation, they should have this number, if available. At minimum, a PI must be able to provide a copy or link of the solicitation to DSPA Pre-Award.

All federal sponsors, and some larger non-federal sponsors (e.g. American Heart Association), have a governing document that provides a broad overview of all application submission requirements (e.g. National Science Foundation has the PAPPG). That document should be used in conjunction with the solicitation, and is typically referenced in the solicitation. These documents work together to assist in building the proposal. When the guidelines and the solicitation differ, the solicitation instructions should be always used.

Solicitation guidelines include programmatic and administrative requirements such as:

- Deadline date, time, and type (i.e. must receive proposal by…)
- Eligibility requirements (PI and/or institutional eligibility)
  - Note: AU is not a Historically Black College or University (HBCU), Minority Serving Institution (MSI), Hispanic Serving Institution (HIS), or a Predominantly Undergraduate Institution (PUI)
  - AU is a public university (institution of higher education)
  - AURI is a 501c3 non-profit organization
- Limitations on the number of proposals submitted by an institution
  - If there is a limit on the number of proposals submitted by an institution, contact the AVP of DSPA immediately, as limited submission opportunities

are managed by a process that determines which faculty member will submit a proposal on behalf of AU.

- Proposal format requirements

- Funding thresholds - maximum dollar amount of the award

- Budget requirements and restrictions – certain budget categories and costs may be restricted

- Cost Sharing – some sponsors require AU to commit institutional resources/funding for the award, such as cost matching

- Method of proposal submission – sponsor may require submission in a certain electronic system or have the proposal submitted via mail or email

- Sponsor contacts – who to contact at the sponsoring entity for questions

- Page limitations on certain aspects of the proposal

- Review criteria

- Special sections (eligibility letter, list of project personnel, other support, appendix, etc.)

Process

The PI/department is responsible for finding grant opportunities and notifying DSPA Pre-Award of their intent to submit a proposal to a sponsor. It is a best practice to create a checklist of all of the documents that are required for the funding opportunity, noting any restrictions and limitations for each document. PIs and their department admins are responsible for compiling all documents that are needed for a proposal, and entering appropriate information in InfoEd for approval routing. DSPA Pre-Award will review the proposal package to ensure it contains the required documentation, and the proposal must be received by DSPA Pre-Award at least 5 days prior to the submission deadline to ensure an adequate review prior to submission. Either DSPA Pre-Award or the PI will submit the proposal to the sponsor, depending on the sponsor's requirements.

Glossary for common elements of a proposal:

Summary - The summary is typically limited to one page or less and gives an overview of the proposed project in plain language understandable to non-experts.
Typically, there are no specific content guidelines for the summary. However, the National Science Foundation (NSF) requires that "Intellectual Merit" and "Broader Impacts" are addressed (See more information under "Unique Elements/Requirements"). The National Institute of Health (NIH) refers to this document as the "Project Summary." Other agencies may call this the abstract or executive summary.
Lay and technical summaries or abstracts may be requested and are often posted publicly as well so be sure that the PI does not include confidential information. The

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Technical Abstract can contain complicated and field-specific terminology and should be written with an audience of research experts in mind. The Lay Abstract should use simple terminology and focus on the overall design and purpose, keeping in mind that the audience is usually consumer reviewers or others without a technical background.

The Specific Aims or Objectives is typically one page. The first paragraph should establish the scientific problem, introduce the current knowledge in the field, and identify how the proposal will fill a gap or critical need. The second paragraph describes the long-term goal of the research, identifies the objective of this particular research project, and shows how it fits into the longer-term goals of the entire research program. Most sponsors require the research to be hypothesis-driven. Therefore, include and highlight a clearly defined hypothesis supported by evidence.

The Aims/Objectives will follow and link to the hypothesis or purpose of the proposal. This section should summarize what methods will be employed and the expected outcome. However, the focus should be on why the research is being done, not what is done. Depending on the type of application being prepared, research proposals contain two to four aims or objectives. Too many aims will result in comments such as, "overly ambitious". The experiments proposed in the aims should have a common hypothesis. However, the experiments should not be directly dependent upon each other; that is, if aim 1 fails, aim 2 should not fail as a result.

The last paragraph of the Specific Aims/Objectives page summarizes the expected outcome and pay-off of the research project in one to two sentences. It should include an explanation of how the research is going to expand the current field of knowledge.

The Research Plan or Project Description is usually the largest element of a research proposal and describes the experiments or methods planned to achieve each aim/objective/milestone. It should be written in sufficient detail to understand the strategy and its feasibility. The page limit for this section varies by type of proposal and sponsor. In many cases, the Research Plan will include significance and innovation statements.

The experiments described should follow the general outline provided by the Specific Aims focusing on:

- what the researcher is intending to do
- why it is important
- what has already been done in this specific context
- how the work will be done
- benchmarks or metrics

A description of potential problems and alternative approaches is recommended.

A strong statistical approach should be included in any research plan and can be provided by a collaborator if the PI does not have the necessary expertise or has not shown expertise in the literature. The importance of appropriate analytic designs becomes paramount as more review panels include a statistical expert.

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<u>Biosketch</u> is a written document that highlights each individual's qualifications for a specific role in a proposed project. It is similar to a CV/resume

Other Support is a document that shows all resources made available to a researcher in support of and/or related to all of their research endeavors, regardless of whether or not they have monetary value and regardless of whether they are based at the institution the researcher identifies for the current grant. Examples of resources on this document include current grants/contracts the PI is working on and proposals that have been submitted and not awarded (or sponsor has not made a decision to fund). Other Support is sometimes referred to as "current and pending support" or "active and pending support". Funding entities use this information in the identification and resolution of potential overlap of support.

Budget is a summary of project costs

Budget Justification is an explanation and rationalization for the costs requested for the project. The budget justification explains the need for each of the costs requested and describes the importance of those costs. Additionally, the budget justification can be used to show the reviewers that the application is thorough and the team has planned appropriately. The PI should not simply restate what the budget is in the form of words, but should explain have the budgeted costs will drive the work being done.

Subaward Budget is a budget from any subawardees that will be involved in the award

Letter of Support (LOS) is a letter from an individual within AU, usually the Department Chair or Dean that oversees the PI, that shows support for the award. These are incorporated into grant applications to assure reviewers that the project has the support and resources necessary to be successful. LOS can be as simple as a few sentences or may include pages of commitments. The sponsor dictates the format of the LOS. However, the content should convey the commitment provided by the author. There can be great power in LOS, as they give the PI another opportunity to underscore the strength of the proposal. Likewise, superfluous and/or LOS lacking detail can raise concerns rather than aid the proposal.

Project/Performance Site Locations is a document that describes the available facilities and capabilities of these facilities that will help in completing the scope of work.

Resource Sharing Plan is a written plan for items such as a plan for sharing model organisms, final research data, or genomic data.

Description of Use of Animals or Human Subjects
Any use of vertebrate animals and/or human subjects requires that specific information is provided outlining the safety and means to minimize the stress on animals or human subjects.
Each sponsor has specific requirements for these sections generally focusing on recruitment, diversity, consent, and safety of human subjects.

Data Management Plan
Most sponsors require a Data Management Plan. This plan outlines how data is collected, described, stored, and shared. Means of sharing data and results with the academic community and the public is also addressed.

Mentoring or Training Plan
A Mentoring/Training Plan is generally required if the grant application supports training. This plan should address the interaction with the mentor and specific activities that aid the mentee in career development. A training plan should detail all elements that will be required of the participants. The plan should provide both timelines and metrics so that the reviewer knows the goals of the program and how the participants will meet those goals. The plans can be for students, teachers, or advanced fellows. There is generally a diverse group of participants. Therefore, there is a diversity of plans and requirements. The FOA details requirements for a successful plan.

Multi-Principal Investigator Management Plan
Several sponsors allow for multi-PI applications, with one of the PI's typically named the "corresponding PI." These applications require an attachment addressing the "Project Leadership Plan." This plan should address the role for each PI, the agreed procedures for project management and coordination, the decision-making process on the scientific direction and resource allocation, responsibilities regarding fiscal management, the publication, and intellectual property management, means of data sharing and communication, and resolution of potential conflicts.

Limited Submission
If the proposal is a limited submission, the number of applications allowed from a single institution or PI is limited. Limited submissions are managed by the AVP of DSPA.

White Paper
White papers are typically unsolicited documents submitted to a certain sponsor or government entity to judge the interest level for a proposed project. Examples of sponsors that accept this form of communication include National Institute of Standards and Technology, DOD, and Department of Energy. In most cases, white papers are 2-page simple summaries that outline a project and pitch the idea. A white paper does not usually require a formal format.

Letter of Intent (LOI)
Several sponsors require or suggest the submission of an LOI before the submission of the full proposal. LOIs are often very short notices that state the research team, title of the project, and the contact information. The sponsor uses the LOI to determine the workload for reviewing proposals and potential conflicts of interest for reviewers. Letters of intent are typically non-binding; that is, submission of an LOI does not mandate the submission of a full proposal. However, in Canada, LOIs are mandatory. Therefore, be

sure to read the solicitation carefully to ascertain the needs of the sponsor and ensure the responses are prepared properly.

Pre-Proposal

Unlike LOIs, pre-proposals are mandatory for most sponsors who require them. Pre-proposals provide a shorter description of the project used to determine the fit and merit of the proposed project to the opportunity. In many cases, the sponsor will review the pre-proposal and send invitations to those selected to submit a full proposal. In other cases, the sponsor will encourage or discourage submission of a full proposal based on the pre-proposal but leave the ultimate decision on submission to the PI. Typically, the pre-proposal contains a shortened research plan and may include a total budget figure.

Statement of Work (SOW)

Some mechanisms require additional research attachments like a Statement of Work (SOW). The SOW is the outline of specific aims and establishes project milestones. The SOW is often used to establish an awarded grant payment schedule or to track progress.

NSF: Broader Impacts/Intellectual Merit

NSF proposals require the inclusion of subsections addressing Intellectual Merit of the project and the Broader Impact. These two major review criteria for the NSF should be well-developed. Broader Impact typically characterizes how the larger community will benefit from the research project and can include educational outreach programs. Information that summarizes what constitutes Broader Impacts is on the NSF website. Intellectual Merit describes how the proposed project will advance the field of knowledge and its impact on other fields. Address both of these elements with the goal of affecting the world at large and having a sustainable impact. Information on both criteria is in the current NSF review guide. Additional support mechanisms and links are in the Resources subsection.

NIH: Rigor and Transparency, Biological Variables, Authentication of Key Biological and/or Chemical Resources

The requirement to focus on rigor and transparency is detailed in a public announcement made by the NIH (NOT-OD-16-011). The consideration for sex as a biological variable is summarized in NOT-OD-15-102, and the authentication of resources is detailed in NOT-OD-17-068