Introduction to This Document

This file is a copy of the text in the online tutorial about the GLAS Program. Links to external files are omitted here. To access these external files, please refer to the online tutorial.

GLAS Application Tutorial

Writing a successful GLAS application involves advanced planning and preparation. Individuals who are new to research or are first-time grant applicants would benefit from having a mentor guide them in preparing the application and conducting the study, if a grant is awarded.

This tutorial will help develop a successful GLAS application.

• Read about the different application sections.
• Learn from the examples.
• Use the strategy for success.
• Learn about the application review process.
• Follow the submission instructions.

Introduction to the GLAS Program

The AALAS Grants for Laboratory Animal Science (GLAS) program can help you contribute new knowledge to the field of laboratory animal science.

The AALAS Grants for Laboratory Animal Science (GLAS) program, established in 2006, enhances scientific knowledge in laboratory animal health and welfare through research, and it promotes collaborative efforts by the AALAS membership within the broader scientific community.

Examples of research interest include:

• Environmental conditions
• Housing and enrichment
• Pain and distress
• Health and welfare
• Euthanasia
• Advancements in animal care and use
The AALAS Scientific Advisory Committee oversees the GLAS program and selects the applications to be funded each year.

Two Grant Programs

The GLAS program provides two types of competitive one-year research grants in laboratory animal science:

**Standard Grants** (for up to $50,000) are awarded for research proposals that have solid scientific merit, which may include preliminary data or other published data.

**Small Grants** (for up to $7,500) are awarded for research proposals that:

- answer a compelling scientific question but require only a small scale study;
- provide pilot data for future funding proposals;
- are proof-of-principle studies; or
- generate data that will likely guide management or technical practices within the animal facility.
- Highly innovative proposals are encouraged.

AALAS invites members to apply to the GLAS program!

The principal investigator must be an AALAS member, but not the co-investigators.

Technicians and veterinary residents are encouraged to apply!

Applicants are encouraged to collaborate with other research scientists.

Using This Tutorial

Use this tutorial as a guide for success!

- Read about the different application sections.
- Learn from the examples.
- Use the strategy for success.
- Learn about the application review process.
- Follow the submission instructions.

To proceed, click each section in the Application Tutorial menu (at left). A survey for feedback on this tutorial is offered on the last screen. Your comments will be appreciated!

Best wishes on this commendable endeavor!

GLAS Application Tutorial
Writing the GLAS Application

Writing a successful GLAS application involves advanced planning and preparation.

Besides writing the application, there are many steps to the submission process, which take time!

You must:

1. Document preliminary research results, if applicable.
2. Organize and complete your written application.
3. Submit your application to the AALAS GLAS program.
4. Follow up with an email to glas@aalas.org, if you did not receive a confirmation receipt.

Careful planning, thorough background research, and solid preliminary data (if applicable) will ultimately simplify the writing stage.

Note: Individuals who are new to research or are first-time grant applicants would benefit from having a mentor guide them in preparing the application and conducting the study, if a grant is awarded.

Please keep in mind that often applications must be routed through the institution's research or grant administration and the office's processing can take several weeks.

Department heads should process applications through that office because the funds will be issued to the institution on behalf of the PI. Therefore, the grant office has to be involved in processing the funds.

Perspectives and Tips

Know Your Audience.

Assume that the grant reviewers are peers who are generally familiar with your field, but not with the specifics of your research topic and problem.

Style and Format are Important.

In a grant application, the proposed idea must be strong, the research must be well planned, and good style and format will make your proposal easy to understand.

- Avoid jargon, which may confuse the reader.
- Define acronyms.
- Use simple sentences.
- Write clearly and persuasively.
• Bold or underline a key phrase for emphasis.

Write a Complete Proposal.

You should summarize the issue your study addresses, background about the problem, what you want to do (specific aims), the idea that you want to test (your hypothesis or goals), preliminary data to support the hypothesis (if applicable), a practical experimental design and methods to test the hypothesis or meet the goals, possible immediate outcomes that you predict from your approach, your plan to manage potential pitfalls, and the long term outcomes (significance) that you predict will impact the field.

Sell your proposal by stating its significance and the feasibility of your approach, including realistic time/budget constraints.

Tips

Think like a reviewer. A reviewer must read approximately 20 applications and form an opinion about each one. Organize the proposal logically and clearly. Your thought process of the application should be easy to follow. Make your points as directly as possible.

If new to grant writing, find a mentor to get feedback on your proposal before submitting your application. Check whether more experienced colleagues will allow you to look at grant proposals they have submitted in the past. This may help you structure your proposal in the clearest way possible.

Write in plain language so a non-expert may understand your proposed work. Prepare early. Proofread and remove any editorial editing and tracking from the document.

Place your work in perspective. Show the importance to the field and not in just solving a problem at your institution.

Include enough background information to enable a reviewer to understand your proposed work, but keep it succinct so you don't exceed the page limits.

Note that page and word limits are firm maximums; fewer pages are encouraged if the necessary information can be provided in less space. Please observe the formatting requirements on page 2 of the application and the page limits for each section. Applications that exceed these limits will be disqualified.
Sections Step-by-Step

Sections Overview

Click the links in the menu above to read explanations of the GLAS Application sections and approaches to writing them.

Checklist Cover Page

This image shows the checklist for each grant type. Submitting the checklist with your application is optional. The checklist helps you organize the information needed for your application and to track the sections completed. You can mark each box as components are completed. The reviewers may use your completed checklist to orient themselves to your application.
A. General Information

Section A. General Information

1. Research Study Title:

2. Funds Requested (USD):

3. Please indicate which documents will be submitted with your application. This will not affect the review process; however, grant awardees must submit these documents before funds can be disbursed.

- IACUC Approval
- IBC Approval
- IRB Approval
- Other (please describe)

4. Please indicate whether the principal investigator (PI) or a co-investigator (Co-I) has a business or financial interest in the proposed project.

- No
- Yes. Please disclose the business or financial interests in Section G.

The application form you download will be specific to the type of grant you choose: **Small Grant Application** or **Standard Grant Application**. Be sure to use the correct form for your application. A template application file is available for your grant type once you start the grant application process.

Make the application title meaningful but concise. It should clearly summarize the study problem or focus and the approach.

The applicant is the Principal Investigator, pending institutional policies.

Approval documents (IACUC, IBC, or IRB or the local equivalent) are required only if the application is selected for funding. If possible, submit these with the application to prevent funding delays if your proposal is accepted for an award. However, omission of these documents from your application will have no bearing on the grant review.

Investigators with financial ties to the proposal must explain these arrangements in Section F. 3. Disclosures.

The committee aims to fund as many studies as possible that meet are innovative, feasible, and thorough. It can be difficult, however, to stretch the available funds to award all meritorious applications, so opportunities for shared support are considered. Please indicate whether this application, or one similar, is/will be submitted to another funding agency. Please indicate also whether your institution would be willing to fund a portion of your project if not all of your budget can be funded by a GLAS award. For example, because salary support in a Standard grant is possible though generally discouraged, this is a budget item that may be requested of the institution.
Previous Applicants

The application asks whether this application is a resubmission from a prior year. Please discuss how issues raised in the review of your prior application have been addressed. These issues were identified as committee feedback in the letter notifying you that you did not receive an award. If you need another copy of that letter, please contact AALAS (glas@aalas.org).

For resubmission, applications are evaluated in the context of the applications for the current year. While addressing the reviewers’ comments will strengthen the application, there is no guarantee of funding for resubmitted applications.

If you are a previous GLAS recipient, please indicate the years in which you won this award. The committee will access your final report/s and review the publication and presentation track record from your GLAS-sponsored work.

B. Contact Information

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<th>Section B. Contact Information</th>
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<tr>
<td>1. Principal Investigator:</td>
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<tr>
<td>Name:</td>
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<tr>
<td>Degree(s)/Credentials:</td>
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<tr>
<td>AALAS Membership Number:</td>
</tr>
<tr>
<td>Title:</td>
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<tr>
<td>Institution:</td>
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<tr>
<td>Department:</td>
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<td>Building and room number:</td>
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The principal investigator must be a current AALAS member; the co-investigator(s) need not be.

Each Co-investigator needs to have a substantial role and their contributions need to be clear. There is no limit to the number of Co-Is on the application. Personnel may be involved in the study without being named a Co-I. You should assemble a team where each individual, whether a Co-I or not, will have a designated role in the project. Examples include graduate students, veterinarians, scientists, or histologists.

The institutional representatives (financial officer and grants management official) will be responsible for receiving and disbursing the GLAS award, if the application is funded. The principal investigator's and authorized institutional official's signatures are required to process the application.

Who is an authorized institutional official? The authorized institutional means an individual who is authorized to act for the applicant in financial grants, assume the obligations imposed by requirements and conditions that apply to the grant application or award, and has the fiscal...
authority to accept the grant and funds for the institution. Typically, a university will have an office for research development, differing by name among institutions, that designates the authorized official. In a company or corporation, that individual may be a president, vice president, or chief financial officer, for example.

C. Abstract and Hypothesis or Goals

Note that the abstract and hypothesis/goals each have a 250-word maximum.

<table>
<thead>
<tr>
<th>Section C. Abstract and Hypothesis/Goals</th>
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<tbody>
<tr>
<td>1. Abstract</td>
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<td>250 words maximum</td>
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</table>

**Standard grant**: Briefly summarize the research problem, the research plan, and the anticipated outcomes. Details will be requested in sections below.

**Small grant**: The Abstract section is optional.

Abstract

An abstract is optional for a Small GLAS application, but required for a Standard GLAS application.

First impressions count! The abstract is where the reviewers will first assess your proposal. Keep the abstract short, precise, and focused. Be grammatically correct and avoid jargon.

See the hyperlinked example for a well-constructed abstract. (Note: Please remove your browser’s pop-up blockers.)

**Example Abstract**

Note the author’s skill in organizing and summarizing the proposal in 246 words (meeting the 250-word limit). The first sentence identifies the problem, which is explained in the next three sentences. The author proceeds to note the lack of supporting information in the scientific literature, summarize preliminary data on the proposed method, and describe the research aims clearly and concisely. The high impact likely for this research makes a compelling argument to support this proposal.

<table>
<thead>
<tr>
<th>2. Hypothesis/Goals</th>
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<tbody>
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<td>250 words maximum</td>
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</table>

**Standard grant**: State the hypothesis — the idea that you will test to achieve your aims.

**Small grant**: A hypothesis is optional as it may not be applicable to a Small Grant proposal, e.g., in methods development. If so, state your goal(s) in lieu of a hypothesis.

Hypothesis/Goals
The hypothesis is the idea you will test to achieve your aim. Think of it as a question you would like to answer through your study. Then frame it as a statement to be proven true by your study, such as:

"We hypothesize that delivery of isoflurane in 21% oxygen will not impact select physiological parameters in rodents but will reduce atelectasis compared to delivery in 100% oxygen."

Please note that a proposal’s hypothesis is not the same as the null hypothesis. The null hypothesis is a statistical inference on the lack of a treatment effect or a relationship between measurements. When the null hypothesis is disproven in statistical testing, the research results are shown to have yielded a positive effect.

A hypothesis may not be relevant to a Small Grant application, e.g., in methods development. If this is the case in your proposal, please provide the goal(s) for your study.

D. Proposal

Please observe the page limits by type of grant application:

**Standard Grant:** 6 pages maximum

**Small Grant:** 3 pages maximum

If you have a proposal with a low budget ($7,500 or below) and you cannot adequately describe the proposal in 3 pages for a Small Grant application, consider submitting it as a Standard Grant instead if preliminary data exist for your project. Standard Grants have a budget up to $50,000 but no minimum. Please note the features of the two grant types, described earlier. These grant types also differ by review criteria, which are addressed later in this tutorial.

When deciding between submitting an application for a small grant versus a standard grant, please keep in mind the following information. The small grant can be used to fund a small study or pilot study. Budget items such as salaries, facilities, equipment, and travel cannot be included.
The standard grant is able to fund a larger study; however, items such as salary are discouraged and require detailed justification.

Please be aware that a single committee reviews both small and standard grants, so the same study should not be submitted in both categories.

The proposal consists of the following sections, all of which must fit within the page maximum for the grant type:

1. Preliminary Work, if applicable
2. Statement of Work
3. Anticipated Outcome(s)
4. Anticipated Pitfall(s)

To conserve page space in your application, delete the application instructions from your proposal. If the proposal exceeds the appropriate page maximum, it will be disqualified. An appendix (see next page) may be included as an additional page/s and is not considered part of the page maximum.

Appendix

You may include an appendix at the end of Section D for form documents, such as a questionnaire or a scoring sheet, if this information will support the proposal. The appendix does not count against the page maximum specified for the type of grant in Section D. Proposal.

Please do not use the appendix to extend the description of your proposal, else your application will be disqualified.

<table>
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<tr>
<th>1. Preliminary Work</th>
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<tbody>
<tr>
<td><strong>Standard grant:</strong> Provide preliminary or supporting research data to support the hypothesis, including images, charts, and/or tables.</td>
</tr>
<tr>
<td><strong>Small grant:</strong> Preliminary work is optional as it may not be available for a Small Grant proposal.</td>
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</table>

Preliminary work is a requirement for a Standard grant, but optional for a Small grant.

If you or colleagues have produced preliminary data that may support your proposal, it will be helpful to present this information and show how this work leads in to your proposed study.

For example:

- Methods to be used may have been previously proven to work in your laboratory.
- Preliminary data suggest findings that may be confirmed in the proposed study.
- You demonstrate how your previous experience prepared you for this proposal.
Preliminary data provides a back-up to your proposal. If appropriate, include images, charts, or tables that clarify how your current proposal is a logical next step in your research.

If the preliminary work is not yours, clearly identify the source. Provide a reference if it is published.

If no preliminary work has been done, for example in a Small Grant application, state so in the application.

2. **Statement of Work**
   a. State the research problem and provide background information:
   b. Describe the specific aims – these should be manageable goals. If there is more than one aim, make sure that one outcome does not depend on another outcome.
   c. Describe the experimental design, including study methods. Describe the feasibility of the study and provide statistical justification for the numbers of animals being used.
   d. Describe the methods of data analysis and statistical analysis to be used, if applicable.
   e. Provide the predicted timeline for completing the study.

**State the research problem and provide background information.**

Prepare the reviewers for understanding your goals or the hypothesis you will test and the specific aims you hope to achieve. Persuade the reviewers that your proposal is significant.

Example:

*To our knowledge, no studies have been undertaken to directly evaluate if the delivery gas used to administer isoflurane to rodents via nose cone impacts physiologic parameters. Therefore, we propose studies to verify our preliminary findings in mice and rats and to quantify the atelectasis through functional, histological, and imaging techniques.*

Remember: only some reviewers may be familiar with your topic. Avoid jargon and provide all the information to help an unfamiliar person understand.

**Describe the specific aim.**

Consider these examples:

1. *Determine if delivery of isoflurane in 21% oxygen negatively impacts physiological parameters (e.g., body temperature, MAP, PaO₂, PaCO₂, and time to recovery) compared to delivery in 100% oxygen, in order to make rodent anesthesia guidelines based solidly on physiological data.*
2. *Determine the extent of alveolar atelectasis responsible for ventilation/perfusion inequality in rodents receiving inhalation anesthesia delivered in 100% oxygen.*
Describe the experimental design, including study methods.

Describe the feasibility of the study and provide statistical justification for the numbers of animals being used. Include in your justification differences of sex and age.

Be clear and logical--you should provide a solid rationale for the use of the GLAS funds. How you justify your approach/methods can determine your success!

Do you have the resources and expertise to conduct the proposed study? Don’t describe equipment here as there is a follow-up section for facilities and equipment.

Describe the methods of data analysis and statistical analysis to be used, if applicable.

A common source of error in experimental design is the selection of an inappropriate statistical method. Often, such errors are not recognized until too late--when the study has been completed and the data are about to be analyzed. This error can lead to a reduction in the power of the statistical analysis, and consequently a lessening or even negation of the statistical significance of your findings. The scientific paper written in that scenario would be weaker than one utilizing the correct statistical method. Possibly, the paper may be flawed and not publishable in a peer-reviewed journal. As a scientific paper is the ultimate product of your research, carefully plan your statistical approach.

Choosing the right statistical method for your analysis is crucial and requires expertise. If possible, consult a statistician. Alternatively, confer with a mentor who is experienced in the same line of scientific inquiry and has a strong publication record.

What is the predicted timeline for completing the study?

A diagram may help others understand the sequence of events for a complex series of experiments.

<table>
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<th>3. Anticipated Outcome(s)</th>
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<tr>
<td>Explain the possible immediate and long-term outcomes (significance) of the study that you predict will impact the laboratory animal science field. How may the expected results support the GLAS mission? Would the results possibly lead to a subsequent research study?</td>
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</tbody>
</table>

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<tr>
<th>4. Anticipated Pitfall(s)</th>
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</thead>
<tbody>
<tr>
<td>Explain possible pitfalls and experimental design weaknesses in your experimental approach.</td>
</tr>
</tbody>
</table>

Explain the possible immediate and long-term outcomes (significance) of the study that you predict will impact the laboratory animal science field.

- How may the expected results support the GLAS mission?
- Would the results possibly lead to a subsequent research study?
• Explain possible pitfalls and experimental design weaknesses in your experimental approach.
• Indicate how the risks of possible pitfalls will be managed.

See the hyperlinked example for how the possible pitfalls are to be managed in the sample proposal.

Sample Section D. 5. Pitfalls

Sample Section D. Proposal, Part 5.

5. Pitfalls
For our studies, we used medical grade air, which contains approximately 78% nitrogen and 21% oxygen. Room air used at some facilities may have a slightly different composition and may have impurities that need to be filtered prior to use in animals. However, the slight variations in composition of room air compared to medical grade air should not be significant enough to alter blood gas or physiological parameters. Motion can be a confounding factor for use of MicroCT to analyze atelectasis in a non-ventilated rat. However, the Center for Molecular Imaging has experience with this technique. If respiratory motion cannot be overcome, animals can be intubated and ventilated on a low volume to mimic nose cone breathing but to still allow gating. The Flexivent experiments will be performed in collaboration with the co-investigator who has years of experience with this technique (see biosketch). At his recommendation, we have added extra animals to the Flexivent experiment to ensure appropriate parameters have been standardized so that we are able to obtain meaningful data.

E. Facilities and Equipment

Describe the facilities to be used and the available equipment that support the needs of the study. This description will help demonstrate the feasibility of the proposal.

Keep in mind that indirect/overhead expenses are not supported by the GLAS program, and equipment purchases are not permitted in the Small GLAS Grant, which has a $7,500 funding limit.
F. Budget

Every aspect of the budget requires justification. Provide a budget (no page limit) that is consistent with the research plan and appropriately itemized. Include research study costs (in US dollars) to be incurred during the grant’s use, all items requested for funding, and all items to be paid by other sources/consultants. Itemize all donated services, including volunteers where appropriate.

The budget will be reviewed for efficiency and maximum output for funds spent. AALAS reserves the right to negotiate significant salary or equipment requests in proportion to the grant total request.

Provide a solid rationale for use of the GLAS funds!

Provide a detailed, justified budget consistent with the statement of work. Include research study costs (in US dollars) to be incurred during the grant’s use, all items requested for funding, and all items to be paid by other sources/consultants. Itemize all donated services, including volunteers, where appropriate. The GLAS program does not pay indirect or overhead costs.

The Standard Grant program discourages, in general, salary support and such a request requires detailed justification. Salaries for full-time faculty and staff are discouraged. Consulting fees, e.g., for statisticians are acceptable. AALAS reserves the right to negotiate significant salary requests in proportion to the grant total request. No more than $1,000 may be budgeted for travel to make a presentation on the results of the study at the AALAS National Meeting.

- Maximum total budget: $50,000.

The Small Grant program does not cover salaries or travel expenses, and major equipment purchases are discouraged. Consulting fees, e.g., for statisticians are acceptable.

- Maximum total budget: $7,500.

Note: The application will be reviewed for the benefit in outcomes relative to the proposed costs; therefore, every aspect of the budget requires justification.

G. Supporting Information

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<th>Section G. Supporting Information</th>
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<tbody>
<tr>
<td>1. References (1 page maximum this section)</td>
</tr>
<tr>
<td>List all references related to the proposal of this application. Use Comparative Medicine and AALAS format to cite references: (<a href="http://www.aalas.org/publications/cm_jaalas_info_for_mn.aspx">http://www.aalas.org/publications/cm_jaalas_info_for_mn.aspx</a>).</td>
</tr>
</tbody>
</table>

List all references related to this application. Use the Comparative Medicine format to cite references.
2. **Biographical Sketches.** Complete parts a-d for the principal investigator and co-investigators. (2 pages maximum per person)

   a. General Information
      Name:
      Position Title:

   b. Education
      Add rows to the table below to list all post high school education including residency training.

<table>
<thead>
<tr>
<th>Institution/City</th>
<th>Degree (if applicable)</th>
<th>Date Completed (MM/DD/YYYY)</th>
<th>Field of Study</th>
</tr>
</thead>
</table>

Provide brief biographical sketches of the principal investigator and co-investigators. Please identify each person’s role and clarify the qualifications related to this role.

3. **Disclosures of Business or Financial Interest in the Project (1 page maximum this section)**

   Describe the business or financial interest the principal investigator or co-investigator(s) have in the proposed project.

Describe the business or financial interest the PI or any Co-I has in the proposed project. This must be completed if the corresponding box was checked in Section A. General Information.

4. **Support from Other Funding Agencies (1 page maximum this section)**

   List alternate sources of support for this study, including potential budgetary overlaps. Identify the funding agencies to which the principal investigator or co-investigator(s) submitted or will submit the proposed study, or one similar. **Note:** This will not affect how the application is reviewed.

List alternate sources of support for this study, including potential budgetary overlaps. Identify the funding agencies to which the PI or any Co-I submitted or will submit the proposed study, or one similar. **Note:** This will not affect how the application is reviewed.

**Learn from These Examples**

Reading the abstract, proposal, and budget sections in the following sample applications may help you plan your own application for a research project. However, remember that following one of these examples does not guarantee that your application will be funded!

- **Standard Grant application sample**
- **Small Grant application sample**
GLAS Application Review Criteria

For GLAS submissions, the Scientific Advisory Committee urges applicants to adhere to the principles and guidelines of the National Institutes of Health (NIH) for a “strict application of the scientific method to ensure robust and unbiased experimental design, methodology, analysis, interpretation, and reporting of results.” Furthermore, the biological variable of sex should be factored into GLAS studies, where appropriate.

The Standard and Small GLAS Grant programs differ in the criteria for award selection, also known as review criteria. By knowing these criteria, you can better show how your proposal measures up to these criteria as you prepare the Statement of Work.

Standard GLAS Application Review Criteria:

1. Relevance to and consistency with respect to the GLAS mission to enhance scientific knowledge in laboratory animal health and welfare through research:
   a. Will the proposed work enhance knowledge in laboratory animal health and welfare vs. a study that serves only to advance knowledge in another field?

2. Impact on the laboratory animal science field:
   a. Does the proposal address a current problem or issue affecting the broader laboratory animal community?
   b. Will the results of this study affect what we do on a daily basis or alter a current practice in laboratory animal science?

3. Validity of the hypothesis:
   a. Is the hypothesis clearly stated and is the key study aim(s) well defined?
   b. If multiple aims are proposed, is each aim independent of all other aims, i.e. not dependent on the success of another aim(s)?
   c. Is the proposal supported by background information such as cited scientific literature, preliminary data, or detailed rationale? Are these elements clearly presented in the proposal?

4. Validity of methodology and analysis:
   a. Is the proposed study clearly described from beginning to end?
   b. Does the proposal describe analysis by an appropriate statistical method where applicable?
   c. Will the methods and analysis provide for acceptance or rejection of the hypothesis?
   d. Is the study likely to generate adequate data for publication?

5. Feasibility and capability to complete the project, i.e., collective investigator experience, equipment access, and budget:
   a. Do the investigators have the expertise/experience to complete the proposed work? Do the investigators have access to appropriate
b. Do the investigators have access to equipment required for the proposed work?

c. Can the proposed study reasonably be completed within the approved funding period (e.g., one year)? Policy limits all GLAS grants to 1-year studies. Extra time is allowed for completion of the report - 6 months routinely, hence a report deadline of December 15 in year 2 of the award.

d. Is the budget appropriately itemized, reasonable, and justified? How much salary is being requested and for whom? Are there major equipment requests?

Please note: The GLAS Program does not cover indirect/overhead expenses or publication submission fees. In general, the Standard Grant program discourages salary support and major equipment purchases. If included, these requests require detailed justification. The Standard Grant provides up to $1,000 for travel expenses to the AALAS National Meeting to present the GLAS-supported data.

Small GLAS Application Review Criteria:

1. Relevance to and consistency with respect to the GLAS mission to enhance scientific knowledge in laboratory animal health and welfare through research:
   a. Will the proposed work enhance knowledge in laboratory animal health and welfare vs. a study that serves only to advance knowledge in another field?

2. Potential for impact on the laboratory animal science field:
   a. Does the proposal address a current problem or issue affecting the broader laboratory animal community?
   b. Will the results of this study affect what we do on a daily basis or alter a current practice in laboratory animal science?
   c. Will successful completion of this work lead to a larger scale study or serve as the basis for larger funding opportunity relevant to the field?

3. Validity of the hypothesis or study goal(s):
   a. Is the hypothesis or study goal(s) clearly stated? Is the key study aim(s) well defined?
   b. If multiple aims are proposed, is each aim independent of all other aims, i.e., not dependent on the success of another aim(s)?
   c. Is the proposal supported by background information such as cited scientific literature or detailed rationale? Are these elements clearly presented in the proposal?

4. Validity of methodology and analysis:
a. Is the proposed study clearly described from beginning to end?
b. Does the proposal describe analysis by an appropriate statistical method where applicable?
c. Will the methods and analysis provide for acceptance/rejection of the hypothesis or accomplish study goal(s)?
d. Is the study likely to generate adequate data for publication?

5. Feasibility – qualifications of the research team and available resources.
a. Do the investigators have the expertise/experience to complete the proposed work? Do the investigators have access to appropriate consultants or collaborators with subject matter expertise (e.g., statisticians)?
b. Do the investigators have access to equipment required for the proposed work?
c. Can the proposed study reasonably be completed within the approved funding period (e.g., one year)? Policy limits all GLAS grants to 1-year studies. Extra time is allowed for completion of the report - 6 months routinely, hence a report deadline of December 15 in year 2 of the award.
d. Is the budget reasonable?

Please note: the Small Grant program does not cover overhead, investigator salaries, travel, or publication submission fees. Major equipment purchases are discouraged.

A Strategy for Success

Planning Your Approach

After the planning stage, the actual application writing is a major undertaking that requires its own strategies and an understanding of the target audience. Your target audience is the research veterinarians/scientists who will review your application. These individuals are members of the AALAS Scientific Advisory Committee, plus former committee members who serve as ad hoc reviewers.

Try writing the application in sections (initially as drafts) and in this order:

- Your hypothesis (standard grant) or goals (small grant) and specific aims.
- The approach/experimental design and methods, considering the personnel and skills needed for each step.
- Evaluate your specific aims and methods and how they affect your budget.
- As your writing progresses, reevaluate and revise your hypothesis and specific aims.
- Last, prepare your abstract and title.
Write with passion and in an active voice. "I will do..." vs. "It is expected that..." Make a winning argument that you understand the problem, can perform the research, and have access to necessary resources and expertise.

Remember to write clearly and in plain language, so your proposal will be understood easily by experts and non-experts alike.

**Show your draft to an expert who is experienced in receiving funding for grant proposals, especially if he/she shares knowledge of your field.** Don't get discouraged if your draft is criticized; use the comments that make sense to improve your application.

**Submitting Your Application**

GLAS applications must be submitted online via the GLAS Application page, using the Submittable platform. A Submit button is provided to initiate an application. Links to the GLAS application forms (Small and Standard grants) will be live on December 1.

If you will be submitting multiple applications, please create a submission for each application. Please be aware that a single committee reviews both small and standard grants, so the same study should not be submitted in both categories.

If you need assistance, please email glas@aalas.org or call AALAS at 901-754-8620 during the office hours of 8:00 AM to 4:30 PM Central Time.

Your GLAS application has to be completed and submitted on the Submittable platform on February 1, by 11:59 PM Central Time. The Submit link will become inactive and incomplete applications will expire as of February 2, at 12:00 AM Central Time. Please do not email AALAS your application file.

- The following infractions will be cause for DISQUALIFICATION of your application:
  - Exceeding the page limits
  - Deviation from margin, spacing, or font size requirements
  - Omitting or adjusting sections of the application
  - Not fitting the mission of the GLAS program (example, commercial product development or educational events)
  - Scanning the application to PDF

**Useful References**

[Grant Proposals (or Give me the money!)](http://writingcenter.unc.edu/tutorials/grant-proposals/), The Writing Center, University of North Carolina at Chapel Hill.
RULES OF WITTE: Tips on grant writing (courtesy of Prof. Christopher Denny)

Grants and Grant Writing: Index

Tutorial Feedback

We Welcome Your Feedback!

After completing this tutorial, please take a few moments to fill out a three-question survey.

Your comments are valued and will be taken into account for improving this tutorial.

Thank you!

--The Scientific Advisory Committee