



ACVS Foundation Research Grant Programs

www.acvsfoundation.org/research-grants

Contents

Submitting Your Application Online.....	2
ACVS Foundation Research Grant Programs	2
ACVS Foundation Grant Guidelines	2
Required Information for Submitting Your ACVS Foundation Research Grant Application Online	4
Required Information to Enter Online	4
The Submission Process	6
Reference Guide	8
Helpful Tips	12
Grant Application Review Criteria	14

ACVS Foundation Research Grant Programs Submitting Your Application Online

ACVS Foundation Research Grant Programs

The ACVS Foundation considers funding surgery-related clinical and basic research through the ACVS Foundation Research Grant Programs. All applications are submitted online and reviewed by the ACVS Research Committee using a detailed set of review criteria. The Research Committee compiles an evaluative ranking of the applications and recommends the top research proposals to the ACVS Board of Regents (BOR). Recommendations approved by the BOR are then forwarded to the ACVS Foundation for disbursement of funds.

Surgery Resident Research Grant Program

- Grants are only available to candidates in ACVS residencies.
- The resident must substantially participate in developing and writing the application.
- The resident must submit the application in their name and include required details for the Diplomate supervisor and any co-investigator.
- Residents should apply during their first two years, as the project should be completed by the end of their training.
- Funding up to \$15,000 per grant is available.
- Grantees are required to submit an annual progress report.

Diplomate Research Grant Program

This program is designed to fund clinically oriented projects that utilize either clinical case material or experimental subjects to address a clinically oriented surgical problem. The goal of this program is to fund small projects or pilot studies specifically designed to target larger granting agencies.

- Only ACVS Diplomates are eligible to apply as principal investigators.
- Funding up to \$10,000 per grant is available.
- Grantees are required to submit an annual progress report.

Progress Reports

The ACVS Foundation requires grantees to submit an ACVS Foundation Sponsored Research Annual Progress Report each year until the Research Committee notifies the grantee that no further reports are required. Information to report includes accomplishments of the project; manuscripts and publications; and actual or planned challenges. Submit the complete the annual report as an email attachment to acvs@acvs.org.

Failure to submit the progress report on time or grants with inadequate progress will make the principal investigator or, in the case of Surgery Residency Grants, the Diplomate supervisor and the resident ineligible for applying for future ACVS Foundation grants for a period of five years.

ACVS Foundation Grant Guidelines

All research grant applications must be submitted using the ACVS online submission system, which can be accessed via the ACVS website <https://www.acvs.org/foundation/grant-application>.

To be considered for 2020 funding, **applications must be received through the ACVS online submission system by January 15 at 11:59 pm (ET)**. Any other electronic format or paper copy of the application will not be accepted.

Only complete applications will be considered for review. Only one application will be considered from each principal investigator per funding cycle. Similar or identical grants cannot be submitted to multiple ACVS grant programs in the same year.

Research grant funds may only be used for direct expenses of the project. Travel, consultative fees, publication fees, personnel costs, institutional overhead or other indirect expenses will not be funded by the ACVS Foundation grant programs.

Partial funding of a project is possible provided there is appropriate recognition of the ACVS Foundation's contribution in all resulting publications and presentations and that full funding is obtained within six months of the date on the award notification letter. Payment will be initiated when the balance of funding has been secured and documentation thereof is provided to the chair of the ACVS Research Committee. If the investigator fails to obtain full funding within six months, the award will be withdrawn.

If the proposed length of the study is greater than one year, partial payments may be awarded at the discretion of the Foundation's Board of Directors.

There is one application process for the ACVS Foundation grant programs. At the beginning of the submission process, you will be prompted to select a submission type as either Surgery Resident Research or Diplomate Research. Be sure that you complete the information that is applicable to the specific grant program for which you are applying.

The online grant application submission limits access to one person, therefore the Diplomate/resident/PhD student should take the responsibility of submitting their application.

The Surgery Resident Research Grants are only available to candidates in ACVS residencies. The resident must submit the application in their name and include required details for the Diplomate supervisor and any co- investigator. The person submitting the grant (applicant) online will receive all correspondence regarding the submission.

Several months are required for processing. The applicant will be notified of a decision by May 1. An educational critique of the application will be sent to all applicants.

To receive funding, a Memorandum of Agreement must be completed by the applicant's institution or a non-institutional individual Diplomate and returned to the ACVS Foundation office. Additionally, an approved Institutional Animal Care and Use Committee (IACUC) Form for all funded applications involving animals protected by the Animal Welfare Act must be received by the ACVS Foundation office prior to the release of funds. These forms may be submitted to the ACVS Foundation (foundation@acvs.org) electronically in PDF format.

It is expected that within one year of completion of each project, a manuscript will be submitted to a refereed journal, preferably *Veterinary Surgery*, with appropriate recognition of the ACVS Foundation's support.

There are seven sections (A-G) of the online application process. You may save your submission at any point in the process and return to complete the submission. You must complete all required fields in a section in order to save your progress in that section. Likewise, you may edit your completed submission any time before the deadline: January 15 at 11:59 pm (ET).

Required Information for Submitting Your ACVS Foundation Research Grant Application Online

The recommended browsers for grant application submission are Firefox or Internet Explorer.

Documents to Complete Offline and Upload during the Submission Process

During the application process, 5 documents will be required to upload:

- 1) Integrity Statement
- 2) Biographical Sketch Form
- 3) Signatures Form
- 4) Budget Form
- 5) Proposal (PDF format)

Forms 1–3: These forms are at <https://www.acvs.org/foundation/grant-application>. To facilitate your online submission, we suggest that you login and complete these forms prior to beginning the submission process. Be sure to save your form documents to your local hard drive for unloading later, and keep a copy of the completed forms for your records. If you have uploaded the documents and did not keep a copy, you may download a copy from the submission system by following the “To resume the submission process or to edit your application” instructions.

Proposal: You will also be required to upload your proposal document in PDF format. There is no form document for the proposal. You must adhere to the required formatting and content.

These instructions are at <https://www.acvs.org/foundation/grant-application>.

Required Information to Enter Online

Section A: Cover Page (Application Overview)

- Submission type
- Title
- Short Abstract: You may copy and paste your abstract into this section or type it directly into the box. **Note: If you are using Firefox as your browser, use CTRL+V to paste your short abstract text.** Abstract your proposed research and outline objectives, clinical relevance, and methods. **The abstract must be a maximum of 250 words.** Do a word count to ensure that the abstract does not exceed 250 words prior to saving and continuing. The preferred format is single-spaced, in 10–12point Calibri, Times New Roman, or Arial type font.
- Resubmission of proposal
- Project start and end dates
- Total budget and amount requested
- Name and address of all performance sites
- Indicate if the research grant involves animals protected by the “Animal Welfare Act.”
- Institutional ID Number (if applicable)
- Upload completed Integrity Statement
- Investigator’s name and degree. Email addresses are also required for the surgery resident, Diplomate supervisor, or principal investigator.

Section B: Applicant Organization

- Name of applicant organization
- Type of organization: federal, state, local, or other (specify)
- Institution contact for the Memorandum of Agreement
- Name of organization to receive credit for the grant
- Name of the institution to which the check is made payable and the address to which the check should be sent

- If applicable, upload documents required by the Applicant Organization (e.g., institution's administrative approval letter)

Section C: Biographical / Signatures

In this section, you are required to upload two files, which are available at

<http://www.acvs.org/foundation/grant-application>.

- Biographical Sketch: A document containing biographical information for all investigators (Diplomate principal investigator or Diplomate supervisor, resident, and co-investigators).
- Investigators' Signatures: Signatures are required from all investigators involved in the project. Obtain the required signatures and upload a scanned copy, PDF, or other image file. Electronic signatures are not acceptable.

Section D: Previous and Current Research Support

- For current and pending funding: title of the grant; investigator's name; investigator's position in the grant (e.g., principal investigator, co-investigator); funding source; dollar amount; percentage effort; any overlap with current application; and publications resulting from any grant listed. (Limited to 3,000 characters.)
- For all ACVS Foundation Grants which the investigators have received for the past five years: title of the grant; investigator's name; investigator's position in the grant (e.g., principal investigator, co-investigator); dollar amount; percentage effort; and all publications resulting from the grants. (Limited to 3,000 characters.)

Section E: Budget

- Complete the "Detailed Budget for a 12-Month Period" form and upload in PDF format (required). The form is available at <https://www.acvs.org/foundation/grant-application>.
- The budget must include:
 - Equipment (description and cost for each item over \$100)
 - Supplies (description and cost by group or category only)
 - Animals (cost of animal purchase and costs for care including board and transportation)
 - Miscellaneous Expenses (do not include travel, consultation fees, publication fees, or personnel salaries/costs and institutional overhead) *
 - Total Budget
 - Amount Requested of the ACVS Foundation
 - Detailed Budget Justification

***For ACVS Foundation Surgery Resident Research Grants and Diplomate Research Grants, grant funds may be used only for direct expenses of the project.**
- Other Available Support (source and amount)
- Other Requested Support (other requested support for the project including source, amount, notification date)

Section F: Facilities and Equipment

- Description of facilities and equipment for use in the project

Section G: Research Proposal Information

- The proposal and format content instructions document is available at <http://www.acvs.org/foundation/grant-application>.
- There is no form document for the proposal.
- Upload in PDF format.
- The proposal must adhere to the required format and content. **The names of investigators or their institutions should not appear in the proposal.**

- Required Formatting:
 - Type double-spaced
 - Leave 1-inch margins (left, right, top, bottom)
 - Use Times New Roman or Arial type font, 10–12 point size
 - Number all pages at bottom of the page
 - The title of the proposal should appear on the first page immediately preceding the Hypothesis
- Required Content:
 - 1) Hypothesis: (Not to exceed ½ page)
Concisely state your hypothesis as a statement or series of related statements that can be tested by experiment. The statement(s) should be followed by a brief explanation of how the hypothesis would be tested.
 - 2) Specific aim: (Not to exceed ½ page)
Describe what the proposed research is intended to accomplish within the one-year funding period.
 - 3) Background and Significance/Preliminary Studies: (Not to exceed 2 pages) Briefly discuss the background of the proposal by critical evaluation of existing knowledge and by identification of gaps that would be addressed by the proposed research. State concisely the importance of the proposed research by relating the specific aims to the broad, long-term objectives of the proposed investigation and the field of veterinary surgery. Applicants may also use this section to describe preliminary studies that are pertinent to the application or to provide other information that will help establish the competence of the investigator to undertake the proposed research. The proposal must demonstrate the need for and potential impact of the study weighed with humane treatment of animals; terminal studies must be justified adequately.
 - 4) Experimental approach: (Not to exceed 4 pages)
The experimental design and procedures should be described in detail. Include the means by which data will be collected. Discuss potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the stated aim (item 2 above). Provide a tentative sequence or timetable for the investigation.
 - 5) Statistical methods: (Not to exceed 1 page)
Describe how the data will be analyzed and interpreted. State the statistical methods to be used. Specify the number of observations required to yield statistically significant results at a particular confidence level (e.g., 0.05).
 - 6) References: (Not to exceed 2 pages)
List appropriate articles in order cited according to the format of *Veterinary Surgery*.

The Submission Process

All Diplomates and residents have website logins and passwords. If you do not know your login or password, please use the “Forgot your password” option, and your login and password will be emailed to you.

Required fields are indicated by a red asterisk after the field name. The submission deadline is January 15 at 11:59 pm (ET).

To begin the application process:

- 1) Go to <http://www.acvs.org/submissions>.
- 2) Enter user name and password. These are the same as your ACVS website login and password.
- 3) Under “Grant Application: 2020 ACVS Foundation Research Grants; Subcollection: Research Grant Submissions,” click on “Create New Grant Application.”
- 4) Begin completing the application and provide the information as required. See Required Information to Enter Online.

- 5) **Important:** Click on “Save and Continue” after each section.
- 6) **To save your work within any section and continue the submission process later**, ensure that all required fields have been completed within the section, click on “Save and Continue,” click on the ACVS logo (top left), and choose “Log Out” (top right). See “To resume the submission process or to edit your application” instructions.
- 7) **If you have provided all required information**, the “Submit My Grant” section will appear as a tab under “Review My Submission.” Click on “Submit My Grant.” The “Completed application” (excluding uploaded documents) can be printed.

To resume the submission process or to edit your application:

- 1) Go to <http://www.acvs.org/submissions>.
- 2) Enter user name and password. These are the same as your ACVS website login and password.
- 3) The submittal information will appear.
- 4) Click on Details next to Submission Type “Incomplete.”
- 5) Click on the section that you need to work on and continue completing the application.
- 6) **To save your work within any section and continue the submission process later**, ensure that all required fields have been completed within the section, click on “Save and Continue,” click on the ACVS logo (top left), and choose “Log Out” (top right). See “To resume the submission process or to edit your application” instructions.
- 7) **If you have provided all required information**, the “Submit My Grant” section will appear as a tab under “Review My Submission.” Click on “Submit My Grant.” The “Completed application” (excluding uploaded documents) can be printed.

If you have any questions, contact Tracey Delaney at tdelaney@acvs.org or (301) 916-0200 x101.

ACVS Foundation Research Grant Programs Reference Guide

This reference guide has been prepared to give informal, clarifying information on selected parts of the ACVS Foundation grant funding application process that may be misunderstood or poorly addressed by applicants. Common mistakes made by applicants in the proposal submission often detract from its quality and subsequently increase the likelihood of the application scoring poorly during the review process.

This guide is *not* meant to be a comprehensive grant application writing guide, nor a replacement for the official application instructions “Submitting Your ACVS Foundation Research Grant Application Online” (available at <https://acvs.org/foundation/grant-application>). Applicants are encouraged to seek out other resources for specific assistance with grant application preparation, some of which are available on the ACVS Foundation website <https://acvs.org/foundation/grant-resources>.

This guide follows the order of the application/submission process as set forth in the instructions “Submitting Your ACVS Foundation Research Grant Application Online,” under the heading “Required Information to Enter Online.” Some sections are self-explanatory and require no guidance and, therefore, are not covered in detail here.

Questions related to application preparation that are not answered either in this quick reference guide or in the application instructions should be directed to Tracey Delaney, programs coordinator, at tdelaney@acvs.org or 301-916-0200 x101.

Getting Started on the ACVS Foundation Grant Application

Research ideas and projects arise from the need to advance areas of science. Research is aimed at answering fundamental questions surrounding a particular subject or area. Arriving at a fundamental research question is the first step in formulating ideas on how to best answer the question. Some questions are obvious and the approach to answering them may also be obvious. Other questions require more extensive thought to arrive at the question to be answered *and* the best approach to take to be able to answer it. Regardless, an extensive literature review is the first step in formulating a research question that has not been previously answered. **If you do not read history, you may be attempting to repeat history.** It is also important at this early stage of preparation to consider the ultimate impact that finding an answer to the research question will have. There are limited resources devoted to research. One role of the ACVS Research Committee is to decide which applications are likely to have an impact on the field and on animal welfare in general. Impact is one part of an application that should be clearly stated, but not overstated. The goal of any application is to convince the Research Committee that completion of the work will have a benefit to the mission of ACVS. The mission of the ACVS Foundation is *to support the advancement of surgical care of all animals.*

Another critical step early in the proposal preparation period is to identify the **collaborative team** who would be best suited to support the study. Consider carefully whether members of the team have prior experience using the techniques in the study, whether the team has adequate expertise in study design and statistical analysis. It is not unusual to have multiple investigators on a study to strengthen the experimental approach to give the study the best chance at successful completion.

Finally, to demonstrate to the Research Committee a reasonable likelihood of successful completion of the study, it is beneficial to demonstrate in **preliminary data** that the team can perform the techniques proposed in the grant application. Without prior funding, this can be challenging; however, considering

creative ways to demonstrate the investigators have the ability to perform the study can greatly strengthen the application.

The online application consists of several sections as described below.

Section A: Cover Page (Application Overview)

Short Abstract:

The short abstract is a critical part of the application. Reviewers will often read this first and it cannot be overstated that a clear perspective and interest in the application should be gained from reading the abstract. The abstract should include statements regarding the current knowledge gap (the research question), objectives, specific aims and hypotheses, methods, as well as the expected outcomes and impact of the proposed research.

Indicate if the research grant involves animals protected by the “Animal Welfare Act.”

Warm-blooded vertebrate animals used in biomedical research are protected by the Animal Welfare Act. The use of cadaver materials for biomedical research or testing is not.

For the Surgery Resident Research Grant, residents are required to upload a completed “Integrity Statement” during the grant application submission process.

Section B: Applicant Organization

This information is utilized following grant awards. The section is self-explanatory and necessary personnel vary from institution to institution and from academic to private practice investigators.

Section C: Biographical

This form must be completed and uploaded by all applicants. It is generally self-explanatory; however, the following are commonly misinterpreted or misstated on applications.

A: Location:

This is the geographic/institutional location of the investigator. To consider the logistical feasibility of an application, this information is necessary for the Research Committee to understand the role of each investigator, based on where the proposed work will be performed by each investigator.

E: Role in Proposed Project Including Time Commitment (be specific):

It is important to clearly state the role of each investigator in the project. **The time commitment is the time each investigator will commit to this project as a percentage of their other professional time commitments. Time commitment is not the percentage of the project for which each investigator is responsible.** Total professional effort cannot exceed 100%. For residents, effort should be feasible given clinical commitments of their residency.

Section D: Previous and Current Research Support

For residents and investigators early in their careers, it is generally understood by reviewers that there may not be any previous or current research support.

Section E: Budget

The budget is a required document upload. A detailed and accurate budget is one way for the applicant to show reviewers that the project has been well planned and contingencies have been considered. Justification of the budget is an opportunity for the applicant to clarify any budgeted expenses whose relevance to the project may not be obvious.

Other Available Support:

These are other funds, materials, etc., which are currently available for the proposed project. It should be made clear whether there are any restrictions or conditions on the use of other available support as it relates to the proposed project. Any materials or equipment donations from industry should be noted here.

Other Requested Support:

These are other applications for the same project which are currently pending. Applications that have either complete or partial overlap with the current application should be included here. If there is overlap, give details of the amount and type of funding overlap.

Section F: Facilities and Equipment

A clear description of the available facilities and equipment is used by the Research Committee to assess the feasibility of the project and the ability for the investigators to complete the proposed work. Include estimates of case recruitment rates if clinical studies are proposed.

Section G: Research Proposal Information

As with many other aspects of the research application, an investigator's attention to detail can be reflected in the ability to follow required formatting and content requirements. The Research Committee sees a large number of the same application format, and it is often clear when someone fails to follow the required formatting. Spell check and proof read an application entirely, prior to final submission.

Required Content:

- 1) **Hypothesis:** This should be objectively testable. This is precisely what the research should propose to do. The hypothesis(es) should relate directly to the research objectives and vice versa. It is preferable to state the hypothesis in a directional manner, based on the best estimate of the expected results of the research. For the scope of most ACVS Foundation grants, it is unrealistic to have more than one or two hypotheses.
- 2) **Specific Aim:** State as explicitly as possible what the research will accomplish. It is useful to include the investigators' expectations and how they relate to the research objectives. How will the investigators test the hypotheses? There may be more than one specific aim required to adequately test each hypothesis.
- 3) **Background and Significance/Preliminary Studies:** This should be a condensed literature review, making the case for why the proposed research is important and why it should be performed by the investigators. It is important to identify clearly, the knowledge gap (research question) that this research will fill. Making a logical, convincing argument regarding the significance of the research is a critical step in convincing a reviewer that the project should be funded. This section is also where the potential impact of the anticipated research results should be highlighted. Reviewers are a broad cross section of the College membership and the chance that more than one Research Committee member is an expert in your specific field of research is low. For this reason, background arguments should be made in such a way that reviewers who are broadly educated in the field of veterinary surgery can understand. One can think of the background and significance/preliminary studies section as a funnel—directing the reviewer down a progressively more narrow opening so that by the time this section is complete, the reviewer should be surprised that no one has thought of the research question or hypothesis before. Therefore, actually doing the experiment should be a formality because the results will not be a surprise.
- 4) **Experimental Approach:** Investigators should use enough detail that the reviewers can understand exactly what is being proposed. It can be helpful to break the approach down along specific aims, where possible, so that it is easy to follow. It is also possible to have a general approach, and then outline methods to address the specific aims. An important way for applicants to show that they understand and have thought through the details of a project is to identify and address potential limitations of the research and include contingency plans for such events. An obvious flaw in an

application that is not addressed by investigators leaves reviewers concerned about such possibilities. This typically impacts negatively on the scoring of an application. There are no perfect research projects and failure to identify limitations shows that investigators have not thought through the process in sufficient detail to realize the limitations, not that the application is so well constructed as to not contain any limitations!

- 5) Statistical Methods: Generally, to test a hypothesis objectively, statistical analysis of objective data is necessary. There are exceptions to this situation; however, it is most often the case that some degree of data analysis will be performed, with results presented and ultimately interpreted. Designing a study so that a balanced data set is obtained to allow statistical analysis is critical. Central to any statistical analysis, especially when the use of live animal subjects is proposed, is an assessment of the sample size required to obtain meaningful results. This requires an estimation of the variability that the investigators expect in their principal outcome measures (this can be taken from preliminary data, previous studies or literature when similar methods are used), as well as a judgment as to what a clinically meaningful finding would be in terms of a difference between experimental groups (known as the effect size). It is useful to explain the rationale used when presenting this information. Sample size should also take into account drop-out of client owned animals, if applicable. Simply stating that a sample size of six will be used (because that is what all the other studies in this field have used) is insufficient! Again, investigators that have thought through their application fully will be able to present a well-justified statistical approach to the data expected from the project. It is generally worthwhile to consult a biostatistician for assistance in this area of the application.
- 6) References: Use appropriate citation formatting (*Veterinary Surgery*) to complete the reference list and citations. Again, a lack of attention to detail here can reflect poorly on the entire application.

Summary

The comments above have been assembled by the ACVS Research Committee to clarify for inexperienced investigators, some of the jargon and expectations of reviewers for research applications submitted for funding through the ACVS Foundation. Applicants are encouraged to begin preparing applications early and allow time to “fine tune” the application into a clear, precise, and well-organized document that will allow reviewers to understand fully, the scientific merit and importance of the project being proposed. The abstract and first page (hypotheses and specific aims) are critical to capturing their attention and imagination. All applications must be submitted online at <http://www.acvs.org/foundation/grant-application>.

ACVS Foundation Research Grant Programs

Helpful Tips

Introduction

- **Relevance** — Write what is relevant and important to build the story for your study. At the conclusion of the introduction, the reader should have in mind the question(s) your study will address. Use the primary literature to support your premise. Make your argument with concise points and not protracted complex thoughts.
- **Impact** – It is important to convey the impact of the work. In general, the greater the clinical or scientific impact, the better the score. Keep this in mind when establishing your case; try to focus on significant, prevalent, common, impactful research questions.
- **Technology** – Use of modern or new technologies (e.g., diagnostics, therapies, etc.) in research can be persuasive but will only be scored highly if the research content is relevant and impactful at the same time.

Hypothesis

- Every study should test one or more hypotheses. Hypotheses are not proven: the study will produce data that will either support them or refute them.
- Specific aims are objectives that, when achieved, will test the hypotheses. Keep the hypotheses and aims simple and concise. Rambling and vague hypotheses and unspecific aims often indicate a lack of research precision.

Materials and Methods

- Grant reviewers (“reviewers”) want to know that you have performed due diligence and are not repeating work already done.
- Reviewers also want to know if you can actually accomplish the methods that you are setting out to perform in the given time frame. Initial pilot data is a big help in this regard. Even one test run will help reviewers to understand that you are applying yourself to the process.
- If you are setting out to use clinical cases, reviewers will need to know that the cases can indeed be procured in the time period allotted. This is a challenge so showing the reviewers data from retrospective admissions will help.
- Reviewers want to know if you are going to *learn* scientific methodology by being guided in designing a good study. Are you creating flaws from the outset through lack of thought, lack of consultation with experts, lack of design/statistical assistance or input?
- Reviewers expect this project to be YOUR training opportunity. Outsourcing a lot of tests or techniques will not be a project that achieves this goal. The reviewers want you to learn how to do scientific research.
- Although performance of the study cannot happen until funding is available, it is critically important that the study design is solid and well-thought out. As mentioned, pilot data or retrospective data to support your goals or demonstrate feasibility is very useful. Further, demonstration of accurate, basic statistical consideration is key. For example, if you seek to answer a question, but you have no rationale for your sample size, clinical effect size, type of data, or type of analysis, then the proposal will not score as well. Thus, consultation with a statistician is highly recommended.

Statistical Analysis

There is no excuse not to consult with a statistician prior to submitting the grant application. In a non-academic setting, please use resources from your veterinary institution - everyone is there to help and wish the best for your career.

Anticipated Outcome/Results

- Don't be too self-assured even if you find yourself in a big lab which has a great research record. It is more important to consider what you expect might or might not happen. This is the uncertainty of research and why testing of a hypothesis is performed.
- Consider potential pitfalls - how will those be dealt with or worked around?

Budget

Developing a budget is a huge time commitment. However, when reviewers see a detailed and thoughtful budget it means that you, as a researcher, have diligently evaluated what you are going to need and have thought through each step of your research plan.

Writing

There is nothing worse than a lack of flow and the presence of syntax errors that reflect haste and cut-and-paste efforts. It is hard to justify funding a research study that is represented by a poorly constructed grant application with text that shows a lack of care that goes beyond typographical errors. Care relates to everything from the layout of the idea, the organization of the thought process, and the work to be done. Taking care in your writing is training your mind to be careful in everything you do.

ACVS Foundation Research Grant Programs Grant Application Review Criteria

All grant applications are reviewed by the ACVS Research Committee based on the following criteria:

1. Originality/Innovation: Does the application challenge and seek to shift current research or clinical paradigms by utilizing novel theoretical concepts, approaches, or methodologies, instrumentation, or intervention? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

2. Significance: Does the project address an important problem or a critical barrier to progress in the field of veterinary surgery? If aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice in the field of veterinary surgery be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative intervention that drive the field of veterinary surgery? (If funded, will the project have a substantial effect on strengthening the research environment and exposing the resident/Diplomate to research?)

3. Materials and methods: Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed? If the project involves clinical research, are the plans for appropriate selection of clinical subjects, and humane treatment of animals justified in terms of the scientific goals and research strategy proposed? Are the statistical methods appropriate?

4. Environment and Investigators: Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment, and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject population, or collaborative arrangements? Does the application provide sufficient evidence that participants have previously or are likely to pursue research careers? Is the principal investigator, and other collaborators and researchers well suited to the project? Do early or new investigators have appropriate experience and training? Have established investigators demonstrated an ongoing record of accomplishments that have advanced the field of veterinary surgery? Do the investigators have complementary and integrated expertise; are their leadership approach, governance, and organizational structure appropriate for the project?

5. Budget: Was the cost well justified and accurate? Were the guidelines followed in relation to budget (allowed expenses may be limited in specific funding mechanism, e.g., Diplomate Research Grant does not allow personnel cost to be covered in the grant)?

Scoring Scale. The nine-point scoring scale is used to score each criterion.

9 Exceptional	Exceptionally strong with essentially no weaknesses
8 Outstanding	Extremely strong with negligible weaknesses
7 Excellent	Very strong with only some minor weaknesses
6 Very Good	Strong but with numerous minor weaknesses
5 Good	Strong but with at least one moderate weakness
4 Satisfactory	Some strengths, but also some moderate weaknesses
3 Fair	Some strengths, but with at least one major weakness
2 Marginal	A few strengths and a few major weaknesses
1 Poor	Very few strengths and numerous major weaknesses