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## In Search of Funding

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### In Search of Funding

#### **Preface**

Projects in science, the arts, medicine, humanities and education have one thing in common: all require funding. But in today's fiercely competitive funding environment four out of five grant applications are rejected. This document explores the process of developing strong proposals and strategies that will help you succeed in your search for funding. Topics covered include:

Developing good ideas and projects

Grant strategies

The need for networking

Finding funding sources

Resources available to conduct the funding search

Dealing with funding agencies

Collaboration as a grant strategy

Realistic methodologies and work plans

**Budgeting** 

Writing compelling proposals

Resubmitting your proposal

#### **Table of Contents**

<u>Introduction</u>

Good Ideas, Good Projects

**Developing A Grant Strategy** 

The Need For Networking

Finding Funding Resources

Resources of the Office of the Vice President for Research and Economic Development:

Electronic Databases

**Funding Directories** 

**Funding Periodicals** 

**Working With Funding Agencies** 

Funding from Industry

Collaboration As A Grant Strategy

Realistic Methodologies And Work Plans

Realistic Budgets

Writing Compelling Proposals

Resubmissions

**Questions or Comments** 

#### Introduction

The search for external funding is increasingly competitive. In many disciplines as many as four out of every five grant proposals are rejected. Often these rejections are not from lack of merit, but from a failure to design a project that is compelling and fits the needs and priorities of the potential funding agency.

This document is designed to help UNM faculty, staff, and graduate students prepare successful grant proposals. It examines the common problems confronting beginning investigators and shares solutions from successful applicants. This is a general overview intended to be used with other funding and grant writing information available through the Office of the Vice President for Research. Tips and strategies presented here are relevant to anyone seeking funding, but focus on the needs of researchers, scholars, educators, and artists in colleges, research institutions, universities, and medical schools. The topics raised represent stages in the process of project development, beginning with identifying a problem or developing an idea and culminating with the submission of a finished proposal. Investigators should apply these general concepts to their own funding environment. Every agency, foundation, and corporation has its own policies, guidelines, and requirements, and these must be followed to be successful.

Good proposals promote your own objectives; successful proposals fill the needs of funding agencies. A well-designed project will do both, and an important task of the funding search is to achieve a fit between research objectives and the goals and requirements of a funding agency.

Time and effort are crucial ingredients to a s successful grant strategy. Proposals are often put together as a deadline approaches and are uploaded or sent off without review or time for consideration. The proposal is your one opportunity to present your case to the funder. It should be organized, well-developed, comprehensive, well-written, and should follow the guidelines of the funding agency. It should represent your best effort. Approach grant proposals with the same seriousness and creativity you exhibit in your research, and your search for funding will be successful.

#### **Good Ideas, Good Projects**

Grant applications are ultimately judged on the quality of the project's basic idea. A brilliant, compelling idea can overcome many weaknesses in a formal application. If a review panel likes an idea but thinks the budget is unrealistic, they will often ask you to rewrite the budget or may fund the project at a reduced amount. However, if the panel thinks the idea is unimportant, your proposal will probably be rejected irrespective of the budget.

A project idea is usually a response to a perceived problem or need and is formulated only after careful research and assessment of both the problem and its possible solutions. A good project idea is one that is significant and breaks new ground in your field. Peer review is recommended whenever possible, as a check of the project's feasibility and importance. Also, ideas evolve in

relationship to practical considerations; a project must have objectives that are achievable within a realistic time-frame and budget.

A common concern of beginning investigators is whether to play it safe and follow a conservative course or go out on a limb and be more innovative. Former review panelists and program officers almost uniformly recommend a bold idea rather than one that simply fills in holes in existing knowledge. Panelists must review a large number of proposals and one that captures their interest will stand a better chance of being funded. At the same time, these reviewers recommend that your first project be modest in scale, so "boldness" applies to ideas, not budgets.

Ideas may come from reading outside your own discipline, just as advances in other fields can become applications in your own. However, using techniques from other areas requires competence in their application.

#### **Developing a Grant Strategy**

Projects should be part of an overall grant strategy. First proposals sometimes tend to be overly ambitious, promising miracles and demanding superhuman efforts. While the idea should be audacious, the project must be realistic and clearly able to produce concrete results. It is often best to start off with a small, manageable project that will demonstrate your ability to manage a laboratory, for example, or to coordinate a project involving multiple tasks or disciplines.

One way to show that you are capable of achieving objectives is by doing preliminary research. Initial results are extremely useful in demonstrating new methods or approaches, even if those results are not necessarily publishable. They can show that you have mastered the necessary techniques and that the project can achieve its aims.

Starting small also requires envisioning where you want to be in five or ten years, in terms of both your final product and the equipment you will need to produce it. Trying to acquire all the necessary equipment from a single grant is a common mistake. Each project should be viewed as a measured step toward accomplishing your ultimate goals.

With the competition for grant funding, you must prepare yourself for the possibility of rejection. Beginning investigators often equate the rejection of a proposal with the rejection of their basic idea. They then move to a different topic and if that is not funded, to yet another. It is a much better strategy to focus on one or two conceptually related issues and build on the ideas basic to those issues. Then the question is which agency's needs will the project fit? An agency will frequently reject a proposal simply because it does not fit their needs, or further their institutional goals. But because one agency or foundation turns you down does not mean that another will not be interested in funding your project. Resubmit your proposal. It is important to see rejection as a part of the funding environment, not a judgment of your worth.

#### The Need for Networking

A successful grant strategy depends upon developing a network of personal and professional connections. You need visibility within your discipline and with funding agencies.

Perhaps the first place to start is with agency and foundation officers. Their task is to fund the best possible projects, so they want to help you develop the best possible project, and are generally open to talking with you about your project ideas. However, some private foundations discourage all phone calls, visits, and letters except for short letters of intent. Do not try to establish direct contact with these agencies, simply follow directions.

The best way to achieve visibility is by being active in your field. Attend conferences and seminars, give papers, and interact with your peers. If you are interested in corporate support, make sure you attend conferences where there is heavy industrial participation. Most business grants or joint projects derive from company personnel's personal knowledge of your work. Expanding contacts with your colleagues is also effective. If people know of your work, they are more apt to tell you about funding opportunities you might have missed. Further, establishing a cooperative network of other investigators allows you to get peer review of your projects, and to share strategies and approaches that will increase your chance of success.

In some highly competitive fields, peer review may not be possible because of the danger that ideas or techniques may be "borrowed." Working in more cooperative fields, make sure you allow your colleagues enough time to thoroughly review your proposal. Their schedules are as busy as your own, so do not send someone a proposal that is due the following week.

#### **Finding Funding Sources**

Locating funding sources has become more complex in recent years. In the past, each discipline had one or two agencies/foundations which provided the bulk of its external support, usually large agencies such as the National Science Foundation (NSF), the National Endowment for the Arts (NEA), the National Institutes of Health (NIH), etc. While these traditional sources continue to be important, often investigators must also seek alternative sources of support.

To extend their limited resources, funders are increasingly turning toward matching grants which require the investigator to raise yet more money, frequently from one to three times the original grant amount. Obtaining a large NSF or NEA grant may not mark the end of your search for a funding source, but the beginning.

However, the situation is not as bleak as this may sound. There are thousands of government agencies and programs, private and corporate foundations, industrial, and corporate direct-giving programs which disperse millions of dollars. Your challenge is to identify which of these myriad agencies and foundations are likely to fund your project. The Office of the Vice President for Research maintains a web site with online resources with <u>electronic databases</u>, <u>limited competition</u> and <u>other information to help you target potential funders</u>.

If you need one-on-one assistance, <u>Faculty Research Support Services</u> staff can offer resources to help you create effective proposals.

It is a good idea to begin your search by conducting an online search for funding, grants.gov is a good place to start. Funders whose objectives match those of your project are the funders whose potential is high enough to merit preparing an application. To make this assessment requires indepth knowledge of your field and your project; only you can determine if your project fits the goals of potential funding sources. Once this is accomplished, you must get to know potential funders. Read their grant guidelines, policy statements, and annual reports. Examine their previous awards. For example, a foundation might be listed as having funded early childhood education programs, but when you examine their previous grants, you find that their real interest is supporting a specific approach, a certain religious affiliation, or a particular population.

Almost all funding organizations have very specific restrictions on which projects they can fund. Some foundations restrict their grants to certain regions, states, or even sections of a single city. Some fund only projects from private institutions, others only from government agencies. Your project must meet all of their requirements. Agencies are flooded with grant applications, and the easiest way for them to narrow the field is to throw out proposals with technical deficiencies.

You must also review the size of the grants given out. Many funders have caps on the amount they can give to any single project. Each organization also has an average range of funding. If they normally fund projects in the \$10,000 to \$20,000 range, do not submit a first grant for \$100,000.

The final step in the selection process is contacting potential funders. This is examined below in the section titled "Working with Funding Agencies."

#### Resources from the Office of the Vice President for Research

Online databases are now the most comprehensive source of funding information, and computer searches of these databases the most effective method of identifying potential funding candidates. There are a large number of databases available to use in your search, and the number continues to grow. These include both federal and private sources, and databases specific to individual fields such as the arts and humanities, science, medicine, or education.

The UNM Office of the Vice President for Research offers a <u>database of UNM-eligible funding opportunities</u>. The majority of these funding opportunities are pulled from <u>grants.gov</u>.

#### **Working with Funding Agencies**

Each funding agency has its own goals, agenda and methods of approach. Successful grant applications not only fulfill the agency's requirements, but are seen as helping that organization's goals and objectives. The more your aims fit those of a funder, the more likely you are to receive support. The first step in determining how your project meets the objectives of a funder is to read their philosophical statements (look for these statements online at the funder's web site) . This will help you adjust your proposal to the agency's perspective and vocabulary.

Again, in dealing with funding agencies the basic principles of networking apply. Establish personal contacts whenever possible. People are apt to be more responsive if they are familiar with your work and your goals. Some investigators recommend visiting agencies at least once a year and meeting people face to face. If you live some distance from funding centers, be prepared to telephone long distance frequently if you want people to know who you are and what you are trying to do.

Some foundations require you to limit your initial contact with them to a short letter of intent. Do not send them a rough draft or try to call them on the telephone. The letter of intent should be a concise description of your project the problem you are addressing; the concepts, objectives, and methodology; the amount requested; and the credentials of the institution and personnel involved. This letter will be used to pre-screen your application so it must be well-written, clear, and compelling.

#### **Funding from Industry**

Obtaining funding from industry seems to depend more on direct contacts within a particular business. They need to know your work personally, and in seeking industrial participation you should attend conferences and seminars to demonstrate your work to the private sector. You need to meet people in industry rather than depend solely on searching directories or databases.

#### **Collaboration as a Grant Strategy**

The lack of a track record can be one of the most severe obstacles facing a new applicant. Without previous experience it is hard to get grants; without grants, it may be difficult to gain experience. Many major agencies and foundations recognize this problem and offer grants and awards specifically designed for those just starting out, such as the FIRST Award by the National Institutes of Health.

Collaboration is a way of solving this problem and creating a track record. It may be easier to find funding for a joint project with a more experienced investigator. Also, a collaborative project serves as an endorsement of your capabilities by a senior person in your field, one who knows your work first hand and has confidence in your ability to perform.

In some fields collaboration is not an option, but a way of life. Problems in areas such as medicine, education, and science have become increasingly complex, requiring interdisciplinary and interagency solutions. For example, dealing effectively with drug addicted mothers and babies is a broad medical, social, and psychological problem beyond the capabilities of a single department or government agency. A problem of this scope requires joint effort.

However, collaborative projects can have their own pitfalls. Before you even begin to write a proposal, you must clearly indicate your commitment to the project and define who determines budget and personnel issues. Otherwise, you are likely to find yours elf obligated to perform tasks without the staff or budget needed to accomplish the job. Interdisciplinary efforts can also present difficulties for review panelists, particularly if the fields are not normally linked together. It may take time to educate panelists as to the importance of your approach. Whenever possible, send in preliminary work to demonstrate that the project can and will achieve results.

Ultimately, you cannot build a track record on collaboration alone. You have to show that you are able to make your own contributions, just as you need to write "sole author" papers. Eventually you have to become a principal investigator.

#### **Realistic Methodologies and Work Plans**

Another critical stage in the development of a grant project is designing its methodology and work plan. Reviewers need to see that a project will achieve its objectives. No matter how brilliant your basic idea, you must convince foundations and agencies that your approach will produce concrete results. To receive funding you must have an appropriate methodology with a practical, realistic plan.

A well-designed grant project is a pragmatic effort to resolve a specific problem, whether it is an attempt to trace enzyme chains in the metabolization of carcinogens or a program to involve low-income families in early childhood education. Your methodology should grow directly out of your study of the problem. It should embody a logical, appropriate way to resolve the task at hand. In turn, the work plan must be a series of practical, achievable steps that apply this methodology to the problem, and accomplish the project's objectives.

One common difficulty is that some methodologies and work plans seem to be responses to the needs of an individual or an institution rather than the specific objectives of the project. That is, the proposal appears to have a hidden agenda, primarily concerned with maintaining existing staff or programs. As most foundations and agencies prohibit continuing support, these grant applications are usually rejected.

Another pitfall is trying to take on too much work in too little time. It is best to give a very detailed picture of the work load to convince reviewers that the project is manageable. A detailed work plan also helps justify your personnel needs. This helps avoid a potential long-term disaster: far worse than having a grant proposal rejected is to obligate yourself to a project too ambitious to complete. Your reputation and ability to attract future funding depend upon delivering results.

#### **Realistic Budgets**

For some, budgeting is the hardest part of developing a good proposal. With stiff competition for limited funds, foundations and agencies are concerned with cost effectiveness. Too lavish a budget can lead to rejection of your grant, or to sharply reduced funding that jeopardizes your ability to achieve results. A budget that is too modest can cause reviewers to question whether you can actually accomplish your project's objectives.

Striking the appropriate balance is difficult, as you must envision what your actual costs and needs will be two or three years in advance. The more detailed your work plan, the better you are able to determine these expenses. Special attention should be paid to supplies and materials. These seemingly minor expenses can mount up rapidly, diverting funds from vital areas, short-circuiting your ability to achieve your goals.

In the case of multiple year projects, factor in salary increases as well as reasonable price increases for expendable materials and travel. Before you construct your budget contact people who have successfully completed similar projects and find out what their costs actually were. Plan sufficient time for administrative review and approval of your budget and your proposal as a whole, as required by the Office of Research of Services.

Budgets must also be realistic in relation to the normal range of grants given by a foundation or agency. That is, as mentioned before, do not request \$100,000 from a foundation who normally awards \$10,000 to \$20,000. Further, pay strict attention to what a funder will and will not pay for. Many agencies will not fund publications, seminars, receptions or a variety of other expenses. Others have strict limits on mileage and per diem which cannot be exceeded.

Simple mathematical errors are another all too common problem. An electronic spreadsheet is the easiest way to eliminate this difficulty. These computer programs allow you to make changes while automatically calculating fringe benefits, F+A, and totals. In addition, they allow you to make adjustments more easily if you are funded at a reduced level.

#### **Writing Compelling Proposals**

Ultimately your proposal is reduced to written words, which must be compelling enough to convince reviewers that your project deserves to be funded. Grant writing is not so much a matter of style as it is clarity of thought.

In recent years there has been a tendency to depend on professional grant writers to translate a rough outline of a project into a finished proposal. Experienced grant writers can help with questions of format, style, marketing techniques, and ensuring that your application meets all of the requirements of a funding source. But they cannot replace your knowledge of the field or your understanding of what the project will contribute. To present your project convincingly to reviewers who are usually your peers, you must be actively involved in the writing process even if you employ a grant writer.

When writing a proposal remember who your audience is and under what conditions the proposal will be read. Often reviewers must read through stacks of proposals at night after they have completed their other obligations. Unless you can get reviewers excited about your project in the first page and a half, you run the risk that they will become impatient or bored, and miss your idea. Proposals which are unfocused, attempt to snow the reviewer, or are filled with jargon, are usually rejected.

A well-written proposal conveys clarity of purpose. This is normally a process of reflection and evaluation. Writing can help you in this process by forcing you to define your project, its goals, and its plan of action. Reducing your project to paper is an excellent way of discovering how the entire project fits together.

The quality of writing is also vital. People tend to equate clear prose with clear thinking. If your paragraphs wander or are not well developed, reviewers may assume that the organization of your project will also be slipshod. Peer review is one of the best ways to eliminate these problems. Clarity also suffers when investigators leave proposal writing until the last moment. Proposals should be at least as important as professional articles, papers, and books, as grant projects are the source of multiple publications and impact on your career.

#### Resubmissions

If your proposal is not funded, consult with the agency and request the reviewer's comments. Determine whether it is appropriate to resubmit a revised proposal. If not, identify other potential funding sources.

Remember that because of the competitive funding environment, most grant applications are not funded, and a rejection is not necessarily a judgment of the value of your idea. You must continue to develop your project and resubmit it to be successful.

#### **Questions or Comments**

For questions or comments concerning this document, please contact research@unm. Thank you.

Return to the Table of Contents