### Introduction

This resource maps out the process in a federal healthcare grant pursuit, collating tasks and resources useful for developing and submitting a grant to NIH, AHRQ, PCORI, and HRSA.

If you would prefer another educational opportunity related to federal grants, you may:

- Watch a <u>video seminar on NIH R-Series grantsmanship</u> Larissa Myaskovsky, PhD, FAST, UNM HSC.
- Request an <u>individual grant consultation</u> with a Clinical & Translational Science Center educator.
- Read a workbook from GrantWriters Seminars & Workshops. <u>Purchase directly</u>, or request to borrow a copy <u>from a CTSC educator</u> (copies limited).

#### **Contents**

1.	Ideation	1
2.	Planning	3
	Writing	
	Submittal	
	Review Process	
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### 1. Ideation

During the Ideation phase, you develop an idea you can carry out, assess its funding potential, and determine which major funders might be interested. By the end of this phase, you should feel confident that you have an idea worth of funding.

## 1.1. Develop a preliminary idea.

Identify a niche area and focus on a problem within that area.

Collect and analyze information related to the problem.

Develop a preliminary idea, but don't force it.

Write a paper or create a model to illustrate the idea.

### Tip

Plan to write a concept paper and draft a logic model to capture your idea.

A concept paper quickly captures the broad ideas of your idea and its value. Eventually, your concept paper will evolve into your grant application.

A logic model visually represents the inputs and impacts of your idea. It can be valuable as a planning and a selling tool.

### Resources

- Guidance on Concept Paper Illinois State University
- Logic Models Examples the University of Kansas

## 1.2. Improve your idea.

Seek constructive criticism from knowledgeable colleagues.

Gauge the idea's potential for success and modify it if necessary.

Refine idea to maximize its potential to change the field.

Back to top

### 1.3. Assess yourself.

Take stock of your expertise, resources, personnel, and data to determine if you are equipped to pursue this idea competitively.

Resources

PI Grant Readiness Self-Assessment Tool - North Carolina State University

<u>Before Writing: Faculty Readiness and Submission Considerations</u> – webinar from National Institute of General Medical Sciences

Back to top

## 1.4. Assess your competitors.

Research the peer-reviewed literature relevant to your idea to identify similar funded and published projects.

Tip

Request a systematic literature search from a UNM HSC HSLIC librarian.

Back to top

## 1.5. Identify an agency that aligns with your project goals.

Catalog the entities who might fund a project like yours. Read the strategic and logistic information these agencies provide to determine how well your project might fit into their portfolio.

Tip

Begin by examining the following for the major funders:

- Mission/Vision
- Portfolio
- Programs for new investigators, if applicable
- Types of opportunities
- Grant schedules

Current opportunities

### Resources

- Agency for Healthcare Research and Quality (AHRQ)
- National Institutes of Health (NIH) Institutes and Centers
- Patient-Centered Outcomes Research Institute (PCORI)
- Health Resources & Services Administration (HRSA)

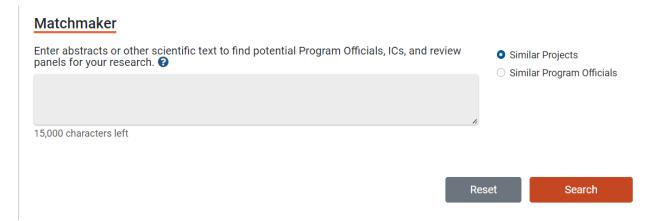
### Back to top

## 1.6. Assess funding potential.

Explore the portfolios of a few potential funders in order to identify funded projects and past opportunities that are similar to your proposed project. This will help you understand trends in funding, identify collaborators and competitors, and focus your future grant.

### Tip

A great place to start for most healthcare research is the <u>NIH RePORTER</u>, a database portal with access to reports, data, and analyses for NIH supported research. Search via keywords or enter scientific text into their <u>Matchmaker</u> to identify related projects and opportunities:



### Resources

The NIH RePORTER includes projects from AHRQ and HRSA, but does not include PCORI projects.

To research PCORI projects, explore the PCORI portfolio.

<u>Clinical Trials.gov</u> is a useful resource to understand current trials in process ahead of publication.

## 2. Planning

During the Ideation phase, you developed an idea and took initial steps in exploring funders.

In the Planning phase, you will deepen your funder research and your understanding of what successful applications involve. By the end of it, you should have a strategy for your writing and submission.

## 2.1 Stay abreast of funding opportunities.

Subscribe to funding announcements from potential funders. Make time to read the announcements regularly.

### Tips

- UNM HSC Office of Research distributes funding announcements to faculty researchers on a weekly basis. You can <u>review those opportunities here</u>.
- Subscribe to announcements from <u>Grants.gov</u>, the US government's procurement website.
- Review the NIH's weekly funding opportunities and notices.

### Back to top

## 2.2 Learn about funder review processes.

Read the grant process resources for your potential funders. For now, look at the overall process. Answer the following questions:

- Who manages the application processes?
- What are the steps of the review process?
- When is an IRB approval required?
- Who are the reviewers?
- How do they review?
- Using what criteria?
- What happens after review?

### Resources

NIH	AHRQ	HRSA	PCORI
<ul> <li>Planning Your NIH</li> </ul>	<ul> <li>Peer Review</li> </ul>	<ul> <li>Grant Reviews at</li> </ul>	<ul> <li>What You Need to</li> </ul>
<u>Application</u>	Process at AHRQ	<u>HRSA</u>	Know to Apply
<ul> <li>NIH Peer Review</li> </ul>	<ul> <li><u>Funding Award</u></li> </ul>		<ul> <li>Merit Review at</li> </ul>
NIH Peer Review	Process at AHRQ		<u>PCORI</u>
Revealed – Mock	<ul> <li>Study Sections for</li> </ul>		
Study Section	<u>AHRQ</u>		

# 2.3 Determine human subjects approval requirements from your local Institutional Review Board (IRB).

If your project involves human research, you'll need to conform to your IRB's requirements for protocol approval. Some funders will not issue grant awards unless IRB approval has been obtained. Use your funder research, and your IRB policies, to determine when it is appropriate to develop and submit your IRB protocol. In most cases, you should plan to prepare an IRB submission as soon as possible.

### Tip

Discuss your IRB review requirements with the funder and the IRB to confirm what is required and on what timeline.

### Resource

• UNM HSC Human Research Protections Office

Back to top

## 2.4 Seek scheduling and policy assistance from your local office of sponsored projects.

Your institution has an office dedicated to ensuring funding request like yours are financially and organizationally sound. They will need time to review your application prior to your submission. Review their policies to ensure you understand what portions of your application they will want, and when.

### Resource

• <u>UNM HSC Sponsored Projects Office</u>

Back to top

## 2.5. Make a plan to contact a funding program officer.

Funders assign specific individuals to manage their opportunities. Depending on the funder, they might be called Program Officers or Project Mangers. They are always listed on a given funding announcement.

A Program Officer's job is to spend the funds allocated for their opportunities in such a way their agency advances its mission. They are your central point of contact when you have questions before and during a pursuit. You should read the funder information and determine when it is best to contact them.

### Before an Opportunity

If you don't have a specific opportunity in mind, and are exploring funders, contact Program Officers now to ask about:

- What funding mechanisms are appropriate for you
- Current funder priorities
- Appropriate scope or focus of your idea

During a Pursuit

If you contact a Program Officer while pursuing a specific opportunity, contact them to ask about:

- Appropriateness of your idea for the current opportunity
- Technical submission questions

### Tip

When you contact a Program Officer, be aware their time is limited. Ask for a phone conversation, but be prepared for an email exchange as well. Include as much information as you can to help them answer your questions:

- Your name, academic role, years in your role, and any prior/current grants you've received from the funder.
- Your concept paper.
- A list of questions.

### Back to top

## 2.6 Digest and adopt the style of writing that grants require.

Read guidance on how to present your ideas effectively within the grant application format, and make a plan to incorporate that guidance within your writing process.

A major reason that grant applications lose is poor writing style. Writing that is unclear, unfocused, and awkward can torpedo a great idea, so read some summaries of grant style tips to understand the foundations of exciting writing.

### Resources:

- Five Writing Style Secrets to Get You Funded Grant Training Center
- How to Win A Grant: Flip the Yes Switch James Buckhouse
- The Best-Kept Secrets To Winning Grants Kendall Powell, Nature

### Back to top

## 2.7 Read successful grants.

Review successfully funded grant applications, if available. Highlight compelling language and good style examples that you can emulate in your application.

### Tip

Note that some funders do not make applications public. Public grants from the NIH are more readily available from AHRQ, HRSA, or PCORI.

If you have access to successful applications, read them closely for inspiration on how you can write your own application.

### Resources:

Sample NIH Application Banks

- From the National Institute of Allergy and Infectious Diseases
- From Harvard's Public Health Research Administration School
- From Columbia University
- From North Carolina Translational and Clinical Sciences Institute
- From University of Alabama Center for Clinical and Translational Science

### Back to top

## 2.8 Identify a funding opportunity.

Review the funding announcements from your potential funders. When you find one that piques your interest, read the opportunity documents closely until you understand the funder expectations. Start by examining:

- The purpose and function of the funding mechanism
- Application requirements
- Timeline
- Investigator/applicant requirements
- Criteria

Read every section of the announcement and every component and explore every link within each section.

#### Tip

Be prepared to start putting time into this opportunity the moment you discover something appropriate.

### Resource

Understanding a Funding Opportunity Announcement (FOA) – Tufts University

### Back to top

## 2.9 Catalog your resource requirements and contact your local cores and facilities.

Identify the resources required to conduct the grant project. Pay special attention to unique program elements like human subjects protections and collaborative agreements.

Determine how to access the resources within your organization. Determine how to fill any gaps using external resources if appropriate. Make preliminary contact with your resource providers and request memoranda of understanding (MOUs) to establish your future relationship.

### Tip

Start with the resources available to you in your department, then explore the research facilities and cores available at the institution.

### Resources

• School of Medicine - Research Allocation Committee (RAC) for SOM resources.

Clinical and Translational Science Center services

### Back to top

## 2.10 Learn the application requirements

Catalog the application forms required by the opportunity. Make notes of what you will need in order to complete them.

Read the overall guidance on formatting your application, including font guidance, pagination, and use of images and color.

Tip

Pay special attention to the elements your funder emphasizes. For example, PCORI applications must include an Engagement Plan which incorporates their engagement tools and resources.

Back to top

## 2.11 Organize your time to complete your application.

Make sure your specific research aims can be accomplished within the proposed time and resources.

Make sure you have adequate preliminary data.

Consider identifying experienced investigators in your organization, or in other organizations, who might be able to review a draft of your application and provide you feedback.

Develop a feasible timeline with draft application deadlines. Be realistic about the time it can take to write and revise the application, incorporate feedback, and get the application to your sponsored projects office on time.

Build in extra time for unforeseen circumstances (e.g. equipment issues, personnel issues, etc.)

### Resources

Sample NIH timeline

Now you are ready to begin writing the application.

Back to top

## 3. Writing

In the Planning phase, you learned as much as you could about your funder and their processes and priorities.

During the Writing phase, you will compose, edit, and revise your entire application. You should plan to dedicate a considerable amount of time to this effort so it has the best chance of success.

## 3.1 Set up your required accounts and approvals.

Identify the accounts and approvals required by the funder for the opportunity. Agencies may require:

- TIN number
- ERA Commons account

Identify the approvals your organization requires internally for you to pursue the opportunity. You may need:

Departmental approval

Back to top

## 3.2 Draft your specific aims.

For most applications, the Specific Aims page is the summary of your grant. It is the first portion reviewers read, and they must come away with trust and confidence in your ideas. Think of the Specific Aims page as the backbone of your application in that it supports everything in your application.

Tip

Reviewers appreciate a logical, consistent format. Model your page after the guidance in the resources.

### Resources

- NIH Grant Applications: The Anatomy of a Specific Aims Page BioScience Writers
- Specific Aims: The Most Important Part of Your Application Grant Training Center

Back to top

## 3.3 Complete the administrative forms.

Fill out the forms required to submit the grant application. By doing this early in the process, you give yourself time to focus on the programmatic elements.

Back to top

## 3.4 Write and submit a letter of interest if requested.

If your FOA indicated the need for a letter of interest, draft it and get it ready to submit now. Not every grant pursuit requires a cover letter.

Back to top

## 3.5 Draft preliminary titles.

Write 4 or 5 titles for your application and have a few peers review them. Select the best.

Your project title is one of the first things your reviewers will see, so spend some time ensuring it is compelling, informative, and clear.

Refer back to the applications you found during your funder research for inspiration. Which titles stand out to you?

### Tip

Consider carefully your reviewers' varied backgrounds in composing your title. Depending on funder, your application might be reviewed by scientists familiar with your field, scientists unfamiliar with your field, or members of the public.

Back to top

### 3.6 Draft statements of value for funder criteria.

Write succinct, easy-to-read statements that directly state how your project will help the funder achieve their goals.

### Tip

In your review of funder priorities and your read of the FOA, you uncovered the criteria and grant elements your funder prioritizes. Funders sometimes provide opportunities to directly explain the value of your grant against these priorities. For example, NIH applications often include sections on *Significance* and *Innovation*, while PCORI applications can include specific sections on *Implementation*.

Back to top

## 3.7 Draft the rest of your research plan.

You've already written two key components of it: your Specific Aims page, your statements of value against funder criteria, and your titles. To round it out, use the guidance provided by the funder to develop your research strategy.

### Resources

- Write Your NIH Research Plan
- How to Prepare Your HRSA Application
- Essentials of the ARHQ Research Plan
- For PCORI pursuits, refer to the funding announcement templates.

Back to top

## 3.8 Draft information related to resources and institutional support

Write the sections required by your funder to document the time, space, tools, and other support you have available for your project.

### Resources

• <u>5 Organizational Criteria That Win Grants</u> – Grant Training Center

## 3.9 Draft your budget and budget justification.

Know what type of budget will be required to submit with your application (found in your funding opportunity).

Understand the various components of the budget, working with your institution's central grants office and department administrator.

Contact program officials regarding allowability and other budgetary questions.

### Resources

- <u>About NIH Budgets</u> (also applicable to HRSA and AHRQ)
- About PCORI Budgets

Back to top

## 3.10 Draft summary content

Depending on your funder, draft the information that summarizes your project for administrators, reviewers, and the public. Refer to your funding mechanism and any samples of successful grants for guidance and inspiration on this content.

Back to top

## 3.11 Gather and edit key personnel profiles or biosketches.

Depending on funder, your application will include information on the main individuals involved in the project.

### Resources

- NIH. ARHQ, and HRS biosketch instructions
- PCORI: What information should be included in the profile/biosketch?

Back to top

## 3.12 Review draft against opportunity instructions

Retrieve your funding mechanism and all guidance documents. Review your application draft against these as a checklist to ensure you have answered and fulfilled each requirement.

## 3.13 Have colleagues review your application

Pass your application on to trusted colleagues for in-house review.

Review your writing as per tips on good grantsmanship. What do you convey?

Back to top

## 4. Submittal

## 4.1 Submit your application to the Office of Sponsored Projects

In your planning, you determined the schedule required by your extramural funding office. Provide them the content they need to vet your application budget and details in a timely fashion. Respond to any requests for information or changes.

Back to top

## 4.2 Monitor funder requests and respond to them.

Funders can make last-minute requests for information prior to decision. Make sure you monitor your communications so you can respond quickly.

Back to top

### 5. Review Process

## 5.1 Digest any feedback in your review results

Follow the timeline and process to receive any review results. Regardless of funding decision, these results can be invaluable for future efforts, so make time to review and understand them.

This can be a challenging step for anyone seeking funding. Make time in your schedule to process the decision.

### Possible Grant Review Outcomes

Outcome	Reason	
	Your project was not appropriate for the current funding mechanism.	
Rejection during administrative review.	Your application was not compliant with the administrative or formatting requirements.	
Triaged or not discussed due to low preliminary score prior to peer review.	Your review body rejected a portion of the applications because they had too many applications to review in time.	

Decision not to fund after peer review.	Your project went through peer review and received reviewer scores and/or comments. The final decision makers chose to fund other projects which were higher quality or better fits for their mission.
Decision to fund.	Your project went through peer review, and the final decision makers determined it fit their needs.

## Back to top

## **5.2** Plan Next Steps

Potential Actions After Grant Review

Outcome	Action
Rejection during administrative review due to poor fit with mechanism.	Re-examine your idea and the funding request to understand why your project did not match. Explore other funding opportunities and funders and consider another pursuit.
Rejection during administrative review due to noncompliance with guidance.	Reread your application and determine where it deviated from the administrative guidance. Decide how you will avoid this form of rejection in the future.  Consider another pursuit with the same or other funders.
Triaged or not discussed due to low preliminary score prior to peer review.	Revise your idea and consider trying again.
Decision not to fund after peer review.	Read the reviewer feedback. Revise your idea accordingly and try again. Enlist a mentor or colleague with a successful funding track record to help analyze the feedback. Consider submitting to a new opportunity, or resubmit to the same opportunity if invited.
Decision to fund.	Celebrate your win, and get ready to go to work.