

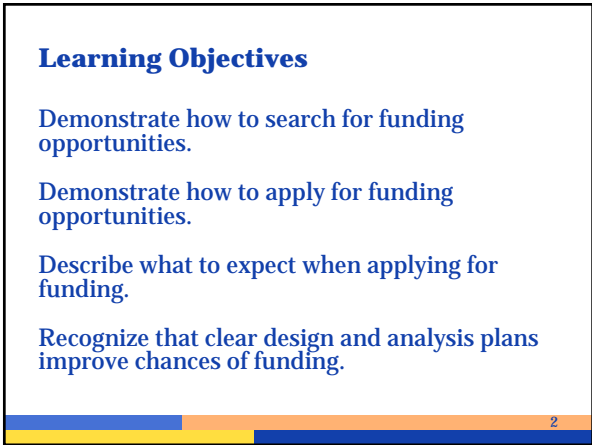


Getting Funded

Course developed by
Deborah H. Glueck and Keith E. Muller

Slides developed by Jessica R. Shaw, Keith E. Muller,
Albert D. Ritzhaupt and Deborah H. Glueck

© Copyright by the Regents of the University of Colorado 1



Learning Objectives

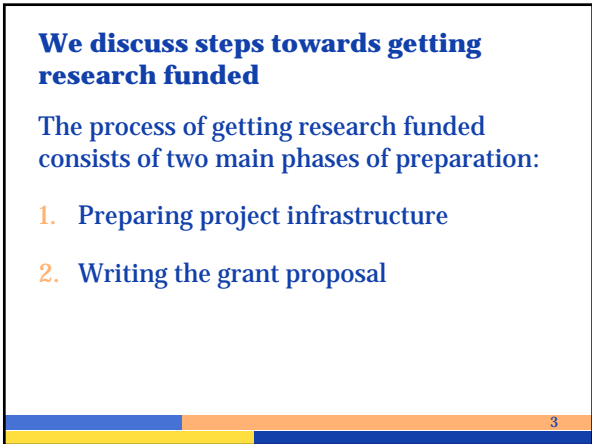
Demonstrate how to search for funding opportunities.

Demonstrate how to apply for funding opportunities.

Describe what to expect when applying for funding.

Recognize that clear design and analysis plans improve chances of funding.

2



We discuss steps towards getting research funded

The process of getting research funded consists of two main phases of preparation:

1. Preparing project infrastructure
2. Writing the grant proposal

3

PREPARING PROJECT INFRASTRUCTURE

4

Preparing project infrastructure involves ten key tasks

1. Define the research idea
2. Identify a funding target agency
3. Choose a type of grant
4. Research the funding announcement
5. Match your topic to a specific funding announcement

5

Preparing project infrastructure involves ten key tasks

6. Explore previously funded research
7. Identify collaborators
8. Write specific aims
9. Talk with program officer
10. Choose a study section if NIH

6

1. Define the research idea

Identify clear research goals.

Consider: What question or questions would you like to answer? What tools would you like to leverage? Which theories or perspectives will guide your inquiry?

7

2. Identify funding target

Funding targets can be public, such as the NIH, or private, such as the Lundbeck Foundation.



8

3. Choose a type of grant

In choosing a type of grant, consider:

The possible amount of funding offered relative to the funding required for your project,

Which career stage the grant opportunity targets,

The competitiveness of the applicant pool,
Opportunity costs.

9

4. Research the funding announcement

Note whether each call for proposals is intended for specific groups of individuals.

NIH provides funding for people from groups historically underrepresented in research, individuals with disabilities, individuals from disadvantaged backgrounds.

<http://grants.nih.gov/grants/guide/pa-files/PA-15-064.html>

10

4. Research the funding announcement

Note the career stage targeted for each call for proposals.

Career stages:

Undergraduate Early career
 Pre-doctoral Mid-career
 Post-doctoral
 Transition to independence

11

4. Research the funding announcement

Note the monetary support provided by different call for proposals

Award Mechanism	R01	R03	R21	R15
Title	Research Project Grant	NIH Small Grant Program (R03)	NIH Exploratory / Development Grant Award (R21)	Academic Research Enhancement Award (AREA)
Parent Announcement No.	PA-11-260	PA-11-262	PA-11-261	PA-12-006
Length of Award	Up to 5 years	Up to 2 years	Up to 2 years	Up to 3 years
Allowable Costs (Direct Costs)	Requires advance permission for \$500,000 or more in any year	Up to \$50,000 per year	Total not to exceed \$275,000 for entire period	Up to \$300,000 for entire 3-year period

12

6. Explore previously funded research

Read about funding awarded and decide if the call for proposals is a good match for your topic.



If the call is not a great fit, **repeat** the previous steps.

16

6. Explore previously funded research

Confirm that no one else is funded on exactly the same topic.

Consult at least three resources:

Resource	Information provided
NIH RePORTER	Funding in progress
Conference presentations	Soon to be published research
PubMed	Related publications

17

7. Identify collaborators

Aim to partner with established experts who are productive.

Use **PubMed** to identify researchers with publications in the same field, complementary skills, and high levels of productivity and impact.

18

7. Identify collaborators

Use NIH RePORTER to identify researchers with history of receiving funding.

Project ID	Project Title	Principal Investigator	Organization	FY	Admin IC	Funding IC	FY Total Cost (by IC)	Number of Projects
2 001 000000 00	DEVELOPING...	GABRIELA DUNA	UNIVERSITY OF COLORADO DENVER	2015	NIDDK	NIDDK	\$22,000	1
3 001 000000 00	EXPLORING THE METAL BINDING...	GABRIELA DUNA	UNIVERSITY OF COLORADO DENVER	2014	NIDDK	NIDDK	\$102,000	1
2 001 000000 00	EXPLORING THE PULS AND... PROPERTIES OF METALLIC...	GABRIELA DUNA	UNIVERSITY OF COLORADO DENVER	2014	NIDDK	NIDDK	\$87,900	1

<http://projectreporter.nih.gov/reporter.cfm>

7. Identify collaborators

Seek collaborators with whom you are likely to have a positive working relationship.

Use word-of-mouth to find congenial collaborators who are kind, ethical, interested and available for collaboration or mentoring.

8. Write specific aims

Write specific aims to match research goals.

Write aims as testable hypotheses, or provide separate testable hypotheses.

9. Talk with program officer

Ask if your aims are “responsive” to the goals of the announcement

9. Talk with program officer

Program officer contact information can be found at the bottom of RFA and PA.

Section VII. Agency Contacts
 We encourage inquiries concerning this funding opportunity and welcome the opportunity to answer questions from potential applicants.

Application Submission Contacts
 eSA Commons Help Desk: Questions regarding eSA Commons registration, submitting and tracking an application, documenting system problems that prevent submission by the due date (post submission issues)
 Telephone: 301-402-7488 or 800-554-3032 (Toll Free)
 Finding Help Online: <http://grants.nih.gov/applyonline.html>
 Email: commons@nih.gov

Grants.gov Customer Support: Questions regarding Grants.gov registration and submission, downloading forms and application packages)
 Contact Center: Telephone: 800-518-4726
 Web: www.grants.gov
 View: www.grants.gov
 Email: help@grants.gov

Grants.gov Questions regarding application instructions and process, finding NIH grant resources)
 Email: Grants@nih.gov (preferred method of contact)
 Telephone: 301-435-2714

Scientific/Research Contact(s)
 Dr. Arthur L. Castle
 National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
 Telephone: 301-594-2714
 Email: castle@niddk.nih.gov

9. Talk with program officer

Parent announcements will offer full lists of contacts

NIH Institute and Center Contacts and Scientific Research Areas of Interest		
NIH Institute or Center Contacts	Scientific / Research Contact Institute / Center Specific Information	Financial or Grants Management Contact

10. Choose a study section for NIH

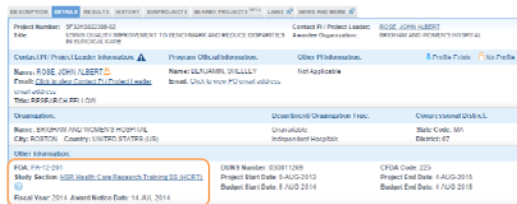
Use NIH RePORTER to look at which study sections provided reviews that led to funding for similar projects.



25

10. Choose a study section for NIH

Identify which study sections reviewed successful grants.



26

10. Choose a study section for NIH

For further information on NIH Study sections, consult the [NIH Center for Scientific Review](#).

The [Study Section Search](#) page provides links to all NIH Study Sections and special emphasis panels.

<https://art.csr.nih.gov/ART/selection.jsp> is an Assisted Referral tool (new in 2017)

27

WRITING THE GRANT PROPOSAL

28

Writing the grant proposal involves seven steps

1. Write the aims
2. Write the analysis plan
3. Conduct an aligned power and sample size analysis
4. Draft the budget

29

Writing the grant proposal involves seven steps

5. Coordinate with grants management administrator
6. Write, revise, repeat (Internal reviewers can help)
7. Submit the proposal and set reasonable expectations

30

2. Write the analysis plan

Write a data analysis plan that is **aligned** with the power analysis.

Remember to identify:

- 1. Clustering
- 2. Predictors
- 3. Covariates
- 4. Repeated Measures
- 5. Response

31

3. Conduct an aligned power and sample size analysis

Recall the procedure for projects with multiple aims:

- 1. Conduct an aligned analysis for each individually
- 2. Select the maximum sample size for all aims **if equally important**
- 3. Account for missing data

32

4. Draft the budget

The budget should include expenses such as materials, staff, recruitment of staff, data collection, and recruitment of participants.

Your institutional grants administrator can help estimate costs. Consult them *early* and often.

33

4. Draft the budget

Sample size may need to be recalculated in light of budget and feasibility constraints.

Examples:

It will take too long to recruit the required sample size.

It will cost too much to conduct original study design.

34

4. Draft the budget

Include a budget justification that explains the rationale for each item in the budget.

Other Direct Costs

Travel (\$5,000 in Years 1-5) Two five-day/four-night trips (\$2500 each) per year are requested for the PI and a Co-Investigator to attend scientific meetings to present the project data. The costs are estimated as follows:

Airfare	\$ 1,000
Hotel	\$ 920 (\$230 per night)
Rental Car	\$ 200 (\$40 per day)
PerDiem	\$ 190 (\$38 per day)
Incidentals	\$ 190
Total	\$ 2,500

Supplies (\$2,185 Yr 1; \$2,070 Yr 2; \$1,955 Yr 3; \$1,840 Yr 4; \$1,725 Yr 5) Project supplies included in the budget will be used in the preparation and distribution of study communications and progress reports, and the compilation of research data and publications. Supplies include stationary, envelopes, resource and reference materials, computer diskettes, toner, and paper. The estimated cost is based on supply costs for similar studies and is calculated at a rate of \$2300 X personnel FTE. Actual costs will be charged to this study.

35

5. Coordinate with grants management administrator

Meet with the grants management official at your home institution to discuss facilities, data sharing, and delegation of grant-writing tasks.

Your grants management officials likely already have drafts of many pieces of the grant, especially the Resources and Facilities sections.

36

6. Write, revise, repeat

Finally, draft your grant proposal and prepare for many rounds of review and revisions.

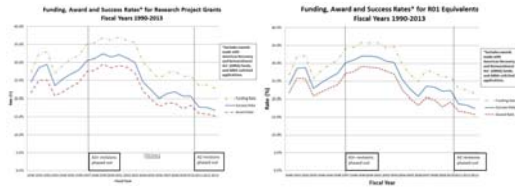
Plan for both internal and external reviewers.

Develop a realistic and polite time schedule for reviews.

37

7. Submit your grant proposal and set reasonable expectations

The NIH accepts a very low percentage of grants submitted.



<https://nexus.od.nih.gov/all/2014/03/05/comparing-success-award-funding-rates/>

38

7. Submit your grant proposal and set reasonable expectations

Why bother with good power analysis in the face of almost certain failure?

39

7. Submit your grant proposal and set reasonable expectations

Despite the likelihood of failure, every grant proposal is a promise to do good science. Accurate power and sample size analysis is an ethical obligation.

It will help get your proposal scored, which greatly increases your subsequent chances of funding.

We have an ethical obligation to participants, other scientists, and society to plan studies that can accomplish their scientific goals without undue burden.

40

7. Submit your grant proposal and set reasonable expectations

Sisyphus, in Greek mythology, was doomed to endlessly roll a boulder up a mountain.

Every time he came to the top, it rolled down again.

41

7. Submit your grant proposal and set reasonable expectations

“I leave Sisyphus at the foot of the mountain. One always finds one's burden again... The struggle itself toward the heights is enough to fill a man's heart. One must imagine Sisyphus happy.”

- Albert Camus

42

Summary

- The process of getting research funded consists of two main phases of preparation:
 1. Preparing project infrastructure
 2. Writing the grant proposal
- Thank you and **congratulations!**

43