How to Write a Successful Grant

Lecture 2
Oct 20, 2016

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Department of Medicine
CALS—not being updated!

Selected opportunities from CALS’ listing of non-federal funding opportunities in agriculture, life sciences, and related fields. View and search the entire list (updated weekly!).

- Morris Animal Foundation Large Companion Animal Proposals (proposal due July 13, 2016)
  Morris Animal Foundation
- Wisconsin Fertilizer Research Program (new proposals due Sept. 9, 2016; continuing project applications due Jan. 6, 2017; request for proposal)
- [Your Idea for a Solution]
  [Your Commitment to the Process]
- Develop good Grant Writing Skills
Qualities of a Successfully funded PI (similar to a Salesman)

- Make a good first impression
- Be well prepared
- Be credible
- Deliver a clear message
- Provide supporting documentation
- Have appropriate endorsements
- Have something special to offer
- Be persistent

**Bottom line: You have to SELL your idea!**

10 Steps to Success

1. Identify a niche area
2. Gather and review background information for this problem
3. Develop a preliminary idea
4. Assess the idea’s potential for success and funding
5. Seek constructive criticism from knowledgeable colleagues
10 Steps to Success –con’t

6. Refine the idea to have impact on your field

7. Learn and practice the skills of writing applications for grant funds

6. Secure collaborators (mentors) to complement your expertise and experience
   Don’t compete … collaborate!

7. Understand the agency MISSION

8. Understand the peer review process

Critical Assessment of Your Idea

- **1st Assess yourself** - Do you have the time, necessary expertise and resources to be truly competitive?

- **2nd Assess the Competition** – Is your idea original?
  Search the literature (Web of Science) and for grants that are funded (RePorter)

- **3rd Assess the funding potential** – Search Agencies and NIH to see what opportunities are available and the missions of those agencies.
Research Portfolio Online Reporting Tool (RePORT)

- A searchable database of federally supported biomedical research (http://report.nih.gov)
- Access reports, data, analyses, expenditures, results of NIH supported research activities
- Identify, analyze IC research portfolios, funding patterns, funded investigators:
  - Identify areas with many or few funded projects
  - Identify NIH-funded investigators and their research
  - Identify potential mentors/collaborators

NIH RePORTer

http://projectreporter.nih.gov/reporter.cfm
Where do I start on my grant?

3 Simple Steps:

- Read the SF424 and FOA instructions carefully
- Read the SF424 and FOA instructions carefully
- Don’t forget ...

... read the SF424 and FOA instructions carefully

Application Development Strategy

Plan/Communicate

(get feedback on your ideas)

Think

(do you have adequate data)

Write

(outline or concept paper)
Refine your ideas

- Generate a unique hypothesis
- Can the Specific Aims be done within the grant timeframe
- Get Colleagues/mentors to review early in the process.

So WHY Plan Ahead?

You’re more likely to get ...

- Good concept and a compelling scientific question
- Appropriate NIH Institute
- Adequate time to complete
  - A major stress reducer!
- A better grant application
Essential Need of a Committed Grant Writer

**CREATE TIME**

- Time to look for funding opportunities
- Time to write a competitive proposal
- Time to get critical review from your colleagues
- *How far in advance should I start planning?*

*“Ideal” Pre-Submission Planning Timeline*

<table>
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<tr>
<th>Months before receipt date</th>
<th>Planning Phase</th>
<th>Writing Phase</th>
<th>Submission Phase</th>
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<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Assess yourself, your field, and your resources</td>
<td>brainstorm; research your idea; call NIH program staff</td>
<td>first outline your application’s structure; then write your application</td>
<td>get feedback; edit and proofread</td>
</tr>
<tr>
<td>Set up your own review committee; determine human and animal subject requirements</td>
<td>receipt date</td>
<td>meet institutional deadlines</td>
<td></td>
</tr>
</tbody>
</table>
Before you start

- Talk to Program officer at appropriate Inst.
- **Read the instructions** for application form *SF 424 R & R*
- **Know your audience**
  - Which review committee is most likely to get your application?
  - *Propose research about which you are passionate and totally committed to doing*

Write as you would for a Newspaper

- **Brevity** - grant pages were cut in half R01 from 25 pages down to 12!
- **Headlines** - hook the reviewer's interest—they need to become your *advocate* at study section
- **Paragraphs** -
  - Introductory paragraphs
  - Each paragraph should make a point
  - Write simple declarative sentences
  - Assertive presentation style – avoid weak words
  - Always present problems as the “glass half full”
Good Grantsmanship

- Grant writing is a learned skill
  - Writing grant applications, standard operating protocols and manuals of procedures that get approved are learned skills
  - Writing manuscripts that get published in peer reviewed journals is a learned skill
- Start by writing with a 3-4 page concept paper

What’s a Concept Paper?

- It helps to generate productive discussion with Program Official and collaborators
  - Study Goals
    - Decide which Inst may support you to study “your” problem?
  - Problem/Background
    - Why does this topic need to be studied?
  - Significance
    - Why this is important to the field?
  - Research Question
    - What hypotheses will you test?
  - Team
    - Who will be the key participants and collaborators?
  - Innovation
    - How is it novel? And how will you approach the problem?
**Good Grantsmanship**

- Collaborate with other investigators
  - Fill gaps in your expertise and training
  - Add critical skills to your team
- “Team Science” is the new direction
  - Stay connected with past colleagues and mentors
  - Cultivate a strong network that understands the funding process

**What should I talk about with a PO?**

- Give the PO a thumb nail sketch of what you have in mind
- Does the idea fit the Institute’s interests?
- Get information from Funding Announcements
- What kinds of grant mechanisms can be used and are there any priorities for those mechanisms?
- Will the PO read your concept paper? Send one.
- Email to set up a time to discuss—remember, this is advice, not obligation
Good Grantsmanship

- It also requires that you pay attention to:
  - **Presentation**-understanding that grant writing is different that other writing styles
  - **Logic**-understanding that it is essential to write in terms that is easily understood
  - **Time**-understanding that a quality grant takes a lot of quality time!

Good Grantsmanship

- It also requires that you show your:
  - **Show Independence** - Consider whether your career stage and expertise are appropriate to the size and scope of the project. Have you published enough?
  - **Have the Resources needed** - Consider whether the available equipment and facilities are adequate
  - **Institutional support behind you**- Letters of reference and institutional commitment are important. Mention any start-up funds, support for a technician, etc.
Parts of a Grant Application

Forms/Parts of a Grant

SF424 – variation of 398 form in electronic form

398 forms — older or current paper format (used mostly for subcontracts)
About Grants

Did you know that NIH is the largest public funder of biomedical research in the world, investing more than $32 billion a year to enhance life, and reduce illness and disability? NIH-funded research has led to breakthroughs and new treatments, helping people live longer, healthier lives, and building the research foundation that drives discovery. Read on for an orientation to NIH funding, grant programs, how the grants process works, and how to apply.

Grants Basics

Research Grants and Fellowships

<table>
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<tr>
<th>Forms / Applications / Instructions</th>
<th>Revised Dates</th>
<th>Description / Comments</th>
</tr>
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<tbody>
<tr>
<td>SF424 (RRR)</td>
<td>08/2012</td>
<td>Standard Form 424 (Research &amp; Related) Grant Application Forms includes application guides and forms to be used with all competing applications for Research, Career Development, Institutional Training awards, and SBIR/STTR Awards. See Applying Electronically Page and Related NIH Guide Notices.</td>
</tr>
<tr>
<td>PHS 398, Rev. 08/12</td>
<td>08/2012</td>
<td>Competing - Public Health Service Grant Application Includes application guides and forms to be used with all competing applications for Cooperative Agreements and Complex Mechanisms with intended due dates ON OR AFTER September 25, 2013 and that do not use the SF424(RR) application package. See 07/25/2013 NIH Guide Notice, NOT OD 13-091.</td>
</tr>
<tr>
<td>PHS 2090</td>
<td>08/2012</td>
<td>Continuation - Progress Report for a Public Health Service Grant Other Resources: • Progress Report Due Dates - by IPF Number • Progress Report Due Dates - by Institution Name</td>
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Basic Parts of any Grant (NIH vs Agency)

- Title
- Abstract (or Scope of Work)
- Budget and Justification
- Specific Aims
- Research Strategy
- Other/Admin
### General NIH Grant Outline

- Face page/title page
- Description summary (abstract and narrative)
- Performance sites
- Key personnel/Biographical Sketch
- Resources
- Detailed budget for initial budget period
- Budget for entire period plus justification
- Specific Aims and Research Strategy
- Compliance issues-IRB, IACUC, Biosafety, etc
- Checklist

### Additional Admin pages

- **Appendix Materials** - The Appendix may not be used to circumvent the page limitations of the Research Plan. New guidelines 1/25/2017
- **Bibliography & References Cited** - Provide a bibliography of any references cited in the Research Plan.
- **Consortium/Contractual Arrangements** - Explain the programmatic, fiscal, and administrative arrangements to be made between the applicant organization and the consortium organization.
- **Consultants** - Attach appropriate letters from all consultants confirming their roles in the project. For consultants, letters should include rate/charge for consulting services.
- **Facilities & Other Resources** - This information is used to assess the capability of the organizational resources available to perform the effort proposed.
**Additional Admin pages**

- **Protection of Human Subjects from Research Risk** - Applicants must assure NIH that all human subjects are protected.
- **Data Safety Monitoring Plan** – new needed for Clinical Trials.
- **Inclusion of Women, Minorities and Children in Research** - Reviewers will also assess the adequacy of plans to include subjects from both genders, all racial and ethnic groups and children.
- **Care and Use of Vertebrate Animals in Research** - If you are planning to use live vertebrate animals, you must adhere to the requirements in the Public Health Service (PHS) Policy
- **Resource Sharing Plan(s)** - This section includes Data Sharing Plan, when applicable, and Sharing Model Organisms.
- **Multiple PD/PI** - For applications designating multiple PDs/Pis, you must include a leadership plan.

**Table 2.6-1. Page Limits**

<table>
<thead>
<tr>
<th>Section of Application</th>
<th>Page Limits *</th>
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<tbody>
<tr>
<td>Introduction to Resubmission Application (3 pages for R25 on PHS398 Research Plan and 3 pages for K12, T and D Training Grants on PHS398 Training Program Plan)</td>
<td>1 page</td>
</tr>
<tr>
<td>Introduction to Revision Application</td>
<td>1 page</td>
</tr>
<tr>
<td>Specific aims</td>
<td>1 page</td>
</tr>
<tr>
<td>Research Strategy (Item 5.5.3 of Research Plan)</td>
<td>6 pages</td>
</tr>
<tr>
<td>Research Education Program Plan</td>
<td>25 pages</td>
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<tr>
<td>Biosketch (per person) (2 pages for DP1 and DP2 Activity Codes)</td>
<td>4 pages</td>
</tr>
<tr>
<td>Research Education (K) Applications</td>
<td>12 pages</td>
</tr>
<tr>
<td>Research Education (K) Education Program Plan</td>
<td>20 pages</td>
</tr>
<tr>
<td>Career Development Award (K) Application</td>
<td>12 pages</td>
</tr>
</tbody>
</table>

*Also refer to the relevant section of the application instructions and the FOA.
### Writing details

- **Font size**: must be 11 points or larger (smaller text in figures, graphs, diagrams and charts is acceptable as long as it is legible when the page is viewed at 100%)
  - Some PDF conversion software reduces font size. It is important to confirm that the final PDF document complies with the font requirements.
- **Type density**: must be no more than 15 characters per linear inch (including characters and spaces)
- **Line spacing**: must be no more than six lines per vertical inch
- **Text color**: must be black (color text in figures, graphs, diagrams, charts, tables, footnotes and headings is acceptable)
- NIH recommends the following fonts: Arial, Garamond, Georgia, Helvetica, Palatino Linotype, Times New Roman, Verdana
- No information should appear in the margins (no headers, footers or page numbers).

### Title

- **Title**
  - Captures the essence of goals and objectives
  - *(NIH-Limit 200 characters c spaces)*
Application Title

Clear and descriptive
Gives the reviewer the first impression of your proposal

Hooks the reader!

Abstract

- **Abstract**
  - Concise presentation of the project
  - Statement of significance
  - Hypotheses and research questions
  - Methods and analyses

**Some reviewers may read only the Title and Abstract**
Abstract

Presents the big picture ...
... Concisely!

Abstract

... is a 2nd “Hook” -- another opportunity to grab the reader

If reviewers are not excited about your application after reading the abstract...
Project Summary/Abstract

NIH Instructions

- The Abstract is meant to serve as a succinct and accurate description of the proposed work when separated from the application. State the broad, long-term objectives and making reference to the health relatedness of the project (i.e., relevance to the mission of the agency).

- This section must be no longer than 30 lines of text.

Abstract/Summary

- It is one of the most important sections as it is read by ALL reviewers
- It needs to be written in plain English because it must be interpretable by laypersons
- It must convey enthusiasm for the project

- It is usually written last, But not at the last minute!
Tips on Writing the Abstract

- Include highlighted components from specific aims and significance---cutting and pasting some sections is appropriate.
- Summarize the approaches or key methods
- Make sure that relevance to the agency’s or institute’s mission is emphasized

Narrative/Summary

- Second component of the Project Summary is the Narrative.
- This is the relevance of this research to the public written in plain language.
- 2-4 sentences is all that is required
The Research Plan

Specific Aims should

- Cover the broad, long-term goals
- Describe concisely and realistically the goals of the proposed research
- Summarize expected outcomes
- Describe the impact on the research field
- Be obtainable within the proposed timeframe
- Grab the reader immediately!!

- Is limited to one page/Most Important page!
Specific Aims-outline

- **Introduction paragraph**
- **Opening paragraph**
  - Provide known/unknowns and problem/need
- **Long range goal paragraph**
  - What, why and whom
- **Aims paragraph**
  - 3-4 at most
- **Impact paragraph**
  - How is this innovative?

Specific Aims Overview

- **Introductory Paragraph**-

  The primary purpose of this paragraph is to convince the reviewers that there is a significant problem that provides a compelling argument for a critical need.
Specific Aims Overview

• **Opening Sentence**

  • Begin to tell the story to convert the reviewer to become an *advocate* for your grant
  • Address two key points:
    • 1) Identify what the proposal is about and
    • 2) immediately relate it to the mission of the agency

Specific Aims Overview

• **Opening Sentence con’t**

  • Must educate the reviewer with what is important in your scientific area
  • Should be 3-4 sentences providing the reviewer with state-of-the art knowledge
  • All key points that reviewers need to know MUST be introduced
  • Should be the conceptual framework for the proposal
Specific Aims Overview

- **Framing the Problem**
  - List all the known’s that led you to your conclusion
  - What is not known to make your case for a “problem”
  - Define the critical need of the proposal
  - Conclude with a lack of a solution being a problem for the funding

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**KEY POINT**

If by the conclusion of the opening paragraph you have not “hooked” every reviewer to believe that there is a significant “problem” or need (related to their mission), then everything that follows does not mean very much!
Specific Aims Overview

• Second Paragraph

The primary purpose of the second paragraph is to convince all reviewers that you and your colleagues have the “solution” to the “Problem” as identified in the first paragraph.

Specific Aims Overview

• Long-Range Goal

  o This is your career long range goal of which this proposal will only be a part of the process.

  o Your long term goal and the mission of the agency should be aligned.

  o Be realistic: do not overstate your capabilities.
Specific Aims Overview

- **Objective of the Application**
  - This is where you define the overall purpose of the project—(not in 1st paragraph)
  - Designed to match “critical need”
  - Must have a well-defined endpoint.

Specific Aims Overview

- **Add a Rationale**
  - Every overview and objectives should have a statement of rationale
  - The rationale is the underlying reason you decided to pursue the project in the first place.
Specific Aims Overview

- Why are you Most Qualified?
  - Your opportunity to sell your “Team” qualifications
  - Summary as to why you have the competitive advantage, e.g.:
    - Unique qualifications of your team
    - Quality and Quantity of preliminary data
    - Unique skills, technology, past success

Specific Aims Overview

Third Paragraph Aims

- The third paragraph is to provide a logical step-by-step development of the key Aims/Goals by which you will fulfill the objective.
- Two to four focused Aims
- Each must be an eye-catching headline
- Each should flow logically one to the next
Specific Aims Overview

• KEY POINT

Each of the aims should be related to the other aims but avoid having one aim being dependent upon a particular outcome of another.

Specific Aims Overview

The Final Paragraph

• The primary purpose of the fourth or final paragraph is to inform the reviewers (and the funding agency) exactly what is the “return on their investment” and why this is of value to the mission of the agency.
Specific Aims Overview

BOTTOM LINE

- This is your Executive Summary
- MAJOR Influence on reviewer
- Write it first, last and every day in between

*Specific Aims samples in handout

Remember: NIH reviewed criteria

- Significance
- Approach
- Innovation
- Investigator
- Environment

Same format as Research Strategy!

*R01 limited to 12 pages
Research Strategy

Answer 5 essential questions:

- What do you intend to do?
- Why is the research important? Significance? Innovation?
- What has already been done?
- What you’ve done already to establish the feasibility of what you are proposing?
- How will the research be accomplished? Who? What? Where? Why?

Research Strategy

Outlined as:

Specific Aim 1
- Significance
- Innovation
- Approach

Specific Aim 2
- Significance
- Innovation
- Approach
Research Strategy

OR as:

Significance
- Specific Aim 1
- Specific Aim 2

Innovation
- Specific Aim 1
- Specific Aim 2

Approach
- Specific Aim 1
- Specific Aim 2

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Research Strategy

Significance (approx 1-2 pages)
- Does this study address an important problem? How are the researchers qualified to address these? Include literature references and highlights of relevant data
- Define the rationale of the proposed research
- Discuss the potential contribution of this research to the field and to public health
- Be aware of existing data and grants AND be sure to reference any potential reviewers from study section.
- List potential barriers and alternative approaches
- Show that the objectives are attainable and within the stated time frame
Research Strategy
Innovation (1/2 to 1 page)

- Are the concepts and methods original to the research field?
- Are the concepts, approaches or methods of the study design innovative?
- Does the project challenge existing concepts or develop new methodologies or technologies?

Research Strategy
Innovation - suggestions

- Describe how your application differs from current research or clinical practice

- Provide a review of the literature to support innovative methods, approaches or concepts of your research

- Summarize the novel findings that will be presented as preliminary data in the Approach section
### Research Strategy Approach (~ 9-10 pages)

- Contains the PI's preliminary data and experience related to the experimental design
- Shows the overview of the experimental design
- Describe the methods and analysis to be used
- Discuss potential difficulties or limitations and how these will be overcome

### Research Strategy Approach (~ 9-10 pages)

- Discuss the expected results and list alternative approaches if unexpected results are found
- Provide a time table of work plan
- Describe any new methodology and why it represents an improvement over existing ones
- Provide a detailed discussion of the way the data will be collected, analyzed and interpreted
Research Strategy

Approach - suggestions

- Avoid excessive experimental detail by referring to publications that describe the methods to be employed esp your own citations
- Explain why a method or approach will be used over another
- If using complex technology for the first time, take care to show familiarity or co-l expertise.
- Develop alternate strategies for potential problems

Investigator(s)/Biosketch

- Are the investigators appropriately trained and well suited to carry out this work?
- Is the work proposed appropriate to the experience level of the principal investigator and other researchers?
- Does the investigative team bring complementary and integrated expertise to the project?

Details in Lecture 3
Environment/Resources

- Does the scientific environment in which the work will be done contribute to the probability of success?
- Do the proposed experiments take advantage of unique features of the scientific environment or employ useful collaborative arrangements?
- Is there evidence of institutional support?

Cover Letter

- Attach a cover letter addressed to the Center for Scientific Review Division of Receipt and Referral
- outline areas of key expertise needed for appropriate review
- You can No longer suggest institutes, study sections or reviewers in the letter
- Do NOT name specific reviewers
- USE the new PHS assignment form
Remember…….

- Provide well-focused research plan
- Keep specific aims simple … *and specific*
- Be realistic … not overly ambitious
- Discuss potential problem areas
- Discuss possible solutions
- Be explicit—Reviewers cannot read your mind …

Don’t assume they know what you intend
Prepare a reviewer-friendly application

- Be well organized and clear
- Use logical transitions between sections
- Avoid “weak” words and abbreviations
- Keep emphasized text to a minimum
- Add section headings -- major and minor and leave spaces between paragraphs
- Make tables and figures easy to view
- Eliminate all misspellings and typo’s
- **READABILTY is key to your success!**

Acquire “Friendly” Reviews

- Show your draft application to a colleague
  - What you intend to do
  - Why you believe it is important to do
  - Exactly how you are going to do it

- If they don’t get it, you must revise your application

- Leave enough time to make revisions
DOM-Internal review

- DOM Research Committee can provide peer review by a reviewer of your choice on campus or off and they are paid for this service

- For more information visit: https://www2.medicine.wisc.edu/home/research/reviewprocess

Eight Basic Questions Reviewers Ask

1. How high are the intellectual quality and merit of the study?
2. What is its potential impact?
3. How novel is the proposal? If not novel, to what extent does potential impact overcome this lack? Is the research likely to produce new data and concepts or confirm existing hypotheses?
4. Is the hypothesis valid and have you presented evidence supporting it?
Eight Basic Questions Reviewers Ask

5. Are the aims logical?
6. Are the procedures appropriate, adequate, and feasible for the research?
7. Are the investigators qualified? Have they shown competence, credentials, and experience?
8. Are the facilities adequate and the environment conducive to the research?

Actual Reviewer Comments You Really Don’t Want to See

“This application is characterized by ideas that are both original and scientifically important...

...unfortunately the ideas that are scientifically important are not original and the ideas that are original are not scientifically important.”
Actual Reviewer Comments You Really Don’t Want to See

“In addition to proposing a research design that is a fishing expedition ...

... the application also proposes to use every type of bait and piece of tackle ever known to mankind.”

Common Reasons Cited for a Weak Application

- Lack of or weak impact
- Significance not obvious or weak
- Too ambitious, lacking focus
- Unclear or flawed hypothesis or rationale
- Applicant track record weak or lacking appropriate expertise
- Feasibility unsupported
- Approach flawed
- Poor writing and lots of errors
Hallmarks of an Outstanding Grant Application

- Strong significance to an important problem in public health: IMPACT is high
- High degree of novelty and innovation
- Strong track record by a well qualified applicant
- Clear rationale
- Relevant and supportive preliminary data
- Clear and focused approach that provides unambiguous results
- Careful attention to details
  - Spelling, punctuation, grammar, fonts, clarity of data, error bars, spelling, etc

Good Review

*Increase your chances of a good review*

- Make sure your application presents well
- Make sure your application goes to the right review group*
- Try to keep your reviewers happy

* Consult with Program Officer
NIH Reviewers

*Keep your reviewers happy*

- Reviewers work late at night
- Help them stay alert and interested
- Make your application easy to read and easy to understand
- Convince them to *advocate* for your idea
  - *Get them on your side!*

After the Critique

Contact your program officer and be prepared to discuss:

- Questions about what the reviewers said about your application (after you have summary statement “pink sheets”)
- Scores and percentiles
- Questions about the fundability of application
- Questions about revising the application
Revising & Resubmitting

- Write A Clear Introduction Section
- Address All Criticisms Thoroughly
- Respond Constructively
- Acknowledge and Accept the Help of Reviewer Comments
- Don’t Be Argumentative!
- Don’t be Abrasive or Sarcastic!

Pre-Submission Planning Timeline

- Months before receipt date: 8, 7, 6, 5, 4, 3, 2, 1
- PLANNING PHASE:
  - Assess yourself, your field, and your resources
  - Brainstorm; research your idea; call NIH program staff
  - Set up your own review committee; determine human and animal subject requirements
- WRITING PHASE:
  - First outline your application's structure; then write your applicatic
  - Get feedback; edit and proofread
- SUBMISSION PHASE:
  - Receipt date
  - Meet institutional deadlines
Components of a Successful Grant Application – **Bottom Line!**

- **Strong Idea**
- **Strong Science**
- **Strong Application**
The Gateway for NIH Grant Applications

The Center for Scientific Review (CSR)

- Receives all NIH applications
- Refers them to NIH institutes/centers and to scientific review groups
- Reviews for scientific merit about 75% of all NIH applications
Your SRO is a doctoral-level scientist with expertise relevant to your field who manages the overall peer review of your application.

Your Study Section Chair partners with your SRO
Your SRO assigns at least three reviewers to your application.

http://public.csr.nih.gov/StudySections/Pages/default.aspx
### AGING SYSTEMS AND GERONTOLOGY STUDY SECTION

#### Chairperson

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ASSOCIATE CHIEF RESEARCH AND DEVELOPMENT VETERAN AFFAIRS MEDICAL CENTER  
TRUDEAU INSTITUTE  
 SARANAC LAKE, NY 12983

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**55 members are on this list!**

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### Roster Index for Regular Standing Study Sections and Continuing SEPs

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<td>Arthritis, Connective Tissue and Skin Study Section</td>
<td>Ansari, Jaffab</td>
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<td>ADCT</td>
<td>AIDS Discovery and Development of Therapeutics Study Section</td>
<td>Prasad, Shiv</td>
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<td>AIDS</td>
<td>Atherosclerosis and Inflammation of the Cardiovascular System Study Section</td>
<td>Malvina, Katherine</td>
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<td>Prasad, Shiv</td>
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<td>AMCB</td>
<td>AIDS Molecular and Cellular Biology Study Section</td>
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<td>AOIC</td>
<td>AIDS-associated Opportunistic Infections and Cancer Study Section</td>
<td>Montalvo, Eduardo</td>
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<td>APHA</td>
<td>Adult Psychopathology and Disorders of Aging Study Section</td>
<td>Chu, Senara</td>
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<td>AGS</td>
<td>Aging Systems and Geriatrics Study Section</td>
<td>Harwood, James</td>
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<td>AUD</td>
<td>Auditory System Study Section</td>
<td>Ludhika, Lynn</td>
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<tr>
<td>BACP</td>
<td>Bacterial Pathogenesis Study Section</td>
<td>Koskinen, Richard</td>
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<tr>
<td>BDM</td>
<td>Biochemistry and Biophysics of Membranes Study Section</td>
<td>Assar-Munt, Nura</td>
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<td>BCHI</td>
<td>Biomedical Computing and Health Informatics Study Section</td>
<td>Jenkins, Melinda</td>
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<tr>
<td>BOMA</td>
<td>Biostatistics and Analysis Study Section</td>
<td>Caprara, Mark</td>
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<tr>
<td>BDRE</td>
<td>Biology and Diseases of the Posterior Eye Study Section</td>
<td>Chatin, Michael</td>
</tr>
</tbody>
</table>

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**50 members are on this list!**
What Your SRO Looks for When Recruiting Reviewers

- Demonstrated scientific expertise/research support
- Doctoral degree or equivalent
- Mature judgment
- Work effectively in a group context
- Breadth of perspective
- Impartiality
- Diversity
- Geographic distribution

At the Meeting: Application Discussion

- Any member in conflict with an application leaves the room
- Reviewer 1 introduces the application and presents critique
- Reviewers 2 and 3 highlight new issues and areas that significantly impact scores
- All eligible members are invited to join the discussion and then vote on the final overall impact score
Discussions Focus on the Best Applications

• Reviewers typically discuss the top half of the applications
• The panel will discuss any application a reviewer wants to discuss

What Reviewers Look for in Applications

• Impact
• Exciting ideas
• Clarity
• Realistic aims and timelines -- Don’t be overly ambitious
• Brevity with things that everybody knows
• Noted limitations of the study
• A clean, well-written application
Enhanced Review Criteria

- Overall Impact:
  - Assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved

- New Core Criteria Order:
  - **Significance** - Research Strategy Section
  - **Investigator(s)** - Biosketches
  - **Innovation** - Research Strategy Section
  - **Approach** - Research Strategy Section
  - **Environment** – Facilities and Other Resources

Scoring – 9 Point Scale

*Scores given from 10 to 90*

<table>
<thead>
<tr>
<th>Impact</th>
<th>Score</th>
<th>Descriptor</th>
<th>Strengths/Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Impact</td>
<td>10</td>
<td>Exceptional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Outstanding</td>
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</tr>
<tr>
<td></td>
<td>30</td>
<td>Excellent</td>
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<tr>
<td>Moderate Impact</td>
<td>40</td>
<td>Very Good</td>
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<tr>
<td></td>
<td>50</td>
<td>Good</td>
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<tr>
<td></td>
<td>60</td>
<td>Satisfactory</td>
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<tr>
<td>Low Impact</td>
<td>70</td>
<td>Fair</td>
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<td></td>
<td>80</td>
<td>Marginal</td>
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</tr>
<tr>
<td></td>
<td>90</td>
<td>Poor</td>
<td></td>
</tr>
</tbody>
</table>
New Investigator or Early Stage Investigator Applications

- **R01 grant applications:** Your status is formally considered and NIH is committed to funding a significant number of these applications.
- **Other grant applications:** Your career stage is factored into the Investigator critique.

NIH must have correct info on your career stage listed in Commons

**OVERVIEW:**

**The Grant Cycle**

<table>
<thead>
<tr>
<th>Planning</th>
<th>Writing</th>
<th>Submitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant should start early, collect preliminary data, and determine internal deadlines.</td>
<td>Applicant often begins writing application several months prior to application due date.</td>
<td>Applicant organization submits most applications to NIH through Federal portal, Grants.gov.</td>
</tr>
</tbody>
</table>

-6 to -8 months | -2 to -5 months & -1 review/edit | “0” submit |

**Receipt and Referral**

Applications compliant with NIH policies are assigned for review by the Division of Receipt and Referral in the Center of Scientific Review (CSR). CSR assigns application to an NIH Institute/Center (IC) and a Scientific Review Group (SRG). Scientific Review Officer (SRO) assigns applications to reviewers and readers.
**Review of Applications**

- 23 CSR Integrated Review Groups
  - 220 standing Study Sections
  - 300 + Special Emphasis Panels

- Review groups at each IC
  - Dozens of standing Study Sections
  - Several hundred SEP meetings

3rd Month | 4th Month

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**After 1st Level Review**

- Priority Scores recorded
- Summary Statements prepared
  - Overall Resume and Summary of Review Discussion
  - Essentially Unedited Critiques
  - Priority Score and Percentile Ranking
  - Budget Recommendations
  - Administrative Notes

- Viewable 4-6 weeks after review meeting
  - *Only available through the eRA Commons*

5th Month | 6th Month | 7th Month
2nd Level Review

• National Advisory Council or Board assesses quality of 1st level review
  • Concurs with or modifies IRG action
  • Reads summary statements only

• Can also designate application as “High” or “Low” program priority for funding

8th Month

Your Summary Statement

• Scores for each review criterion
• Critiques from assigned reviewers
• Administrative notes if any

If your application is discussed, you also will receive:

• An overall impact/priority score and percentile ranking
• A summary of review discussion
• Budget recommendations
NIH Peer Review Revealed - Video


http://www.youtube.com/watch?v=fBDxl6l4dOA&feature=youtu.be

Thanks for attending!