NIH Grant Basics for MDF Fellows

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National Institutes of Health

• 27 different Institutes and Centers (ICs)

• ~$32 billion annual budget

• 80% of funding goes to extramural competitive research grants

• Main ICs supporting muscle disorder research
  – National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
  – National Institute of Neurological Disorders and Stroke (NINDS)
  – To a lesser extent: Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Heart, Lung, and Blood Institute (NHLBI)
The Grant Process

Idea

Funding Opportunity Announcement (FOA)

Prepare Application

Study Section Peer Review for Scientific Merit

Submit Application

IC Advisory Council Recommendation

IC Director makes final funding decision

Notice of Award
Idea

• Think about impact
  – NIH Definition: “The likelihood for the project to exert a sustained, powerful influence of the research field(s)

  – Filling an important gap in the field? Muscular Dystrophy Coordinating Committee (MDCC) 2015 Action Plan objective?

• Consult with colleagues, mentors, peers

• At this point, have a rough idea of what a specific aims page would like
Every application submitted to NIH must be through a Funding Opportunity Announcement (FOA).

How to find FOAs: NIH Guide

Grants.nih.gov/searchGuide/
Can also setup email alerts

Example of an FOA
FOAs (Con’t)

• Types of Funding Opportunity Announcements (FOAs)
  – Parent Announcement (PA)
    • Investigator-initiated application, normal study section (percentiled), standard receipt dates
  – Focused Program Announcements (PA)
    • IC-solicited to encourage applications on a particular topic, normal study section (percentiled), standard receipt dates, may receive institute priority
  – Program Announcement with Special Review (PAR)
    • IC-solicited to encourage applications on a particular topic or area, special study section (not percentiled), special receipt date
  – Request for Applications (RFA)
    • IC-solicited, special study section (not percentiled), usually just one receipt date total
NIH RePORTER and Matchmaker

- Take advantage of NIH’s “big data” to help guide you

**Note:** these tools are not perfect, but can help give you ideas
• What FOA should I apply under?

• What activity code? R01? R21? R03? What do all these mean?

• Never a bad idea to contact your program officer – your primary contact at NIH

• What’s a program officer? What’s a scientific review officer? Who should I contact and when?
Your Partners at NIH

Scientific Review Officer (SRO)
- Manages, coordinates and conducts initial peer review
- Ensures fairness and administrative compliance of applications
- Prepares summary statements

Grants Management Officer / Specialist (GMO/GMS)
- Sets up and issues awards
- Interprets and ensures compliance with grant policies
- Reviews grant business activities

Program Director / Officer (PD/PO)
- Advises on funding opportunities and requirements for applications
- Observes review meetings and interprets summary statements
- Approves funding and monitors scientific progress
- Anticipates future scientific directions, assesses research needs and opportunities
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• Follow instruction guide (SF424) and any special instructions in FOA
  – Rigor and Reproducibility

• Think of the reviewers
  – Who are they? See CSR website – SMEP is a common study section for muscle disorder applications
  – How can I help them do their job?
    • Criterion Scores: Significance, Investigator, Innovation, Approach, Environment
    • Understandable to an informed but diverse scientific audience, well-organized, readable figures, etc.

• Have mentors, colleagues, etc. read and critique
Submit Application

• Can suggest IC and study section assignment, expertise needed to review application in new NIH application form set D
• Allow plenty of time to catch/fix errors, issues
• Application received by NIH Center for Scientific Review, Division of Receipt and Referral
• Assigned to NIH IC and study section at that time

*Longer


1st Level Review - Study Section

- At least three reviewers assigned to each application
- Top 50% of applications generally discussed at meeting
- Preliminary impact scores (not an average of criterion scores) and summary given by three reviewers
- Discussion opened to entire panel who are likely to be influenced by assigned reviewers
- Re-statement of scores from assigned reviewers, then whole panel votes
- Final impact score is the average of this vote, converted to a percentile in many cases but not all
- Program officer may be able to help interpret summary statement

<table>
<thead>
<tr>
<th>Overall Impact or Criterion Strength</th>
<th>Score</th>
<th>Descriptor</th>
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<tbody>
<tr>
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<td>8</td>
<td>Marginal</td>
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<tr>
<td></td>
<td>9</td>
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The Grant Process

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The Grant Process

1. **Idea**
2. **Prepare Application**
3. **Study Section Peer Review for Scientific Merit**
4. **Submit Application**
5. **IC Advisory Council Review**
6. **Notice of Award**
7. **IC Director makes final funding decision**

**NINDS and NIAMS are very payline-driven Institutes**

**Paylines may improve later in the FY**
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Nothing is official until you have the NoA!
Tips for Resubmission

• Very few get funded on their first attempt

• One chance for a resubmission of this application, but *unlimited* chances for an idea

• Respect differences in scientific opinion

• Resubmit when you have addressed all concerns

• Craft the introduction

• Update references
Tips for Managing an Award

• Progress Report – a.k.a. RPPR, a.k.a. Type 5 Progress Report
  – NIH interested in scientific progress and compliance with Notice of Grant Award
  – What worked, what didn’t?
  – Any prior approvals needed?
    • Significant rebudgeting, change in scope, transfer of PI or university, change in human subject or animal use?
    • Carryover?
    • No cost extensions beyond the first?
Summary

• Seek guidance from NIH program officers in choosing an FOA

• Before you submit, get input from mentors, collaborators, department chair, etc. to critique your application

• Discuss summary statement with program officer

• Be persistent, keep the applications coming
OVERVIEW OF THE NATIONAL INSTITUTES OF HEALTH AND
NATIONAL CANCER INSTITUTE
GRANTS PROCESS

PRINCIPAL INVESTIGATOR

CONDUCTS RESEARCH

INITIATES RESEARCH IDEA AND
PREPARES APPLICATION

MANAGES FUNDS

GRANTEE INSTITUTION

SUBMITS APPLICATION

NCI MONITORS
PROGRAMMATIC AND
BUSINESS MANAGEMENT
PERFORMANCE OF THE GRANT

NIH

NIH CENTER FOR
SCIENTIFIC REVIEW
ASSIGNS TO NCI AND
TO STUDY SECTION

NCI MAKES FUNDING
SELECTIONS AND ISSUES
GRANT AWARDS

NCI EVALUATES
PROGRAM RELEVANCE
AND NEED

NCI ADVISORY BOARD
RECOMMENDS ACTION

SCIENTIFIC REVIEW
GROUP (NCI OR
CSR) EVALUATES FOR
SCIENTIFIC MERIT

www.cancer.gov

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