Approaches for Competitive Grant Applications for Extramural Support
Department of Medicine – Educator Track

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Dept. of Medicine
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Course: “Funding and Grantsmanship for Research and Career Development Activities”
http://grantscourse.columbia.edu/
Topics to be Discussed

- Identify Funding
- Prepare to Write the Grant Application
- Complete the Grant Application

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Identify Funding

- Identify appropriate funding agencies
  - Government
  - Non-government

- Identify appropriate funding mechanisms
  - Research
  - Training

- Create a calendar of application deadlines for identified funding programs
How to Find Funding Opportunities

- Networking
- Speak to colleagues who are in a similar field
- Speak to colleagues who have been on governmental or private agency review panels
- Speak to colleagues who are on (advisory) boards of private agencies
- Acknowledgement section of publications, oral/poster presentations, press releases, etc.
Private Foundations

- Non-government, nonprofit organization with its own funds
- Usually from a single source (e.g. individual, family, corporation)
- Program(s) managed by its trustees and directors
- Established to maintain or aid educational, social, charitable, religious, or other activities serving the common welfare, primarily by making grants to other nonprofit organizations.
- Different types: Independent, Company-Sponsored, Operating, Community Foundation

Finding the Right Foundation

Subject
Types of Support
Geographic Location

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Foundation Review Process

- Project planning phase
- Initial inquiry to foundation
- Formal proposal submission
- Possible requests for modifications or rewrites
- Staff evaluation and recommendations
- Board decision
The Foundation Center

New York
32 Old Slip, 24th Floor
New York, NY 10005-3500
tel: 212-620-4230
http://foundationcenter.org/
http://foundationcenter.org/newyork/

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- **Library:** Books, periodicals, and other print and electronic resources; Lending program, “Foundation Directory Online Professional”

- **Courses:**
  - Proposal Writing
  - Proposal Budgeting
  - Finding Grants

- **Chat Live:** Chat online with a reference librarian
The Foundation Directory Online

- 100,000 Grantmakers
- 3.4 million grants
- Tax statements (990’s) showing previous awards
- Access via Columbia University

http://www.columbia.edu/cgi-bin/cul/resolve?clio3328966
General Resources

- **Grants.gov**
  - Database and application system for Federal grants

- **Tips for Writing Grant Applications**
  - [http://grantscourse.columbia.edu/writing.htm](http://grantscourse.columbia.edu/writing.htm)

- **SPIN funding database**
  - [https://www.infoed.columbia.edu/](https://www.infoed.columbia.edu/)
  - e-mail alerts matching research area(s) of interest
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Apgar Grants ($5,000): “…to implement new ways of teaching the complex skill set necessary to advance health care. This could include, but not be limited to, curricular innovations, new approaches to assessment, faculty development projects, and evaluation of new pedagogical methodologies…”

http://ps.columbia.edu/about-ps/apgar

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Apgar Grants: Proposal component (5 pages)

- Rationale
- Pilot Data
- Specific Aims
- Methods
- Plan for Evaluation, Peer Review and/or Dissemination of Results
- Anticipated Results/Plan for Analysis
- Timeline
- Anticipated Impact
- Budget
- Letters of Recommendation (for “junior” faculty)
- Bibliography
The Josiah Macy Jr. Foundation is dedicated to improving the health of the public by advancing the education and training of health professionals. Our grantmaking is focused primarily in five priority areas.

Learn about the types of projects we fund:

- Interprofessional Education and Teamwork
- New Curriculum Content
- New Models for Clinical Education
- Career Development in Health Professions Education
- Education for the Care of Underserved Populations

Learn about our grant opportunities and how to apply:

- Board Grants
- President's Grants
- Macy Faculty Scholars

http://macyfoundation.org/apply/programs
Topics to be Discussed

- Identify Funding
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It’s not the will to win, but the will to prepare to win that makes the difference.

Bear Bryant, University of Alabama
Prepare to Complete the Grant Application

- Speak with Agency Program Officer
- Speak with colleagues who are/were awardees
- Review funded applications if possible
- Review agency’s review criteria
- Identify what will make the application more competitive
  - Research and/or career development arrangements
  - Access to core facilities/research resources
- Strengthen “Preliminary Work/ Pilot Data”
- Who will write letters of reference/support?

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Research and Career Development Arrangements

- Multiple Principle Investigators (research awards)
- Multiple Mentors (mentored awards)
- Advisors (mentored awards)
- Co-investigators/Collaborations
- Subcontracts to other institutions
- Multidisciplinary/Interdisciplinary
Prepare to Complete the Grant Application

- Identify and meet with Co-investigators, Collaborators, Consultants, Advisors
  - Identify roles and responsibilities
  - Administrative requirements
    (e.g. if other countries/institutions are involved)
- Identify necessary core facilities and other research resources
- Meet with research administrators
- Human subjects and any other regulatory issues?
Topics to be Discussed

- Identify Funding
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Complete the Grant Application

- Review the application instructions
- Identify the different components
- Create a checklist
- Create an outline
  - Content, Length of section (vis a vis page limits)
- Identify and delegate responsibilities for the different components
  - Technical/Scientific
  - Administrative – e.g. budget
  - Regulatory
  - Draft letters of collaboration/support
Complete the Grant Application

■ Confirm page limits for each component
■ Create a schedule for any required meetings
■ Determine:
  ■ Shared computer drive/folders
  ■ Naming of files (dates?)
  ■ Track changes?
  ■ Font, margin, format of literature citation
■ Set a **firm** time-line for each responsibility
  ■ Writing milestones
  ■ Absolute deadline date for final compilation
Complete the Grant Application

- Read instructions
- Never assume that reviewers “will know what you mean”
- Refer to literature thoroughly and thoughtfully
- Explicitly state the rationale of the proposed investigation (“the hypothesis of my study is…”)
- Discuss “challenges” and how these will be addressed (e.g., alternate approaches)
- Include well-designed tables and figures
- Present an organized, lucid write-up
- Ask colleagues to review and comment
Complete the Grant Application

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Include Well-Designed Tables and Figures

- Include explanatory caption with the figure (not buried in text)
- Not overly complicated
- Informative, even if printed in black and white
- Easy for the reviewers to read
## Timeline for Specific Aims/Tasks and Benchmarks/Milestones of Programmatic Progress

<table>
<thead>
<tr>
<th>Benchmarks/ Milestones</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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<tbody>
<tr>
<td>Summary of Specific Aim/Task 1a</td>
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<td>Summary of Specific Aim/Task 1b</td>
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<td>Summary of Specific Aim/Task 3</td>
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Anticipate Questions
and
Answer them before
they are asked
Elements of a Good Proposal

- Feasible
- Relevant
- Unique
- Innovative
- Clear
- Brief
- Consistent

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Investigator

- Competent
- Enthusiastic
- Thorough
- Professional
Common Problems with Grant Applications from New Investigators

- Does not address/follow funding agency’s mission, specific instructions, budget limits, etc.
- Overly ambitious
- Not independent of previous mentor’s research
- Fishing expedition
- Not hypothesis driven
- Descriptive, not mechanistic project
- Unfocussed
- No or insufficient preliminary data
- Unrealistic budget
- Methodologies beyond the expertise of investigator or research team
NIH: one round of applications
Bell Curve of Reviewer’s Grant Applications

- Definitely do not fund
- Definitely fund

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Poor Statistics
Research Resources not Adequately Described
Career Development/Research Training Plan not Comprehensive
All Components of the Application are as Strong as Possible

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Good Luck!