Grant Writing: An Introduction
Effective Proposal Development
Office of Research
Office of Corporate and Foundation Relations

Workshop Agenda
- Review basic grant terms and parts of a grant proposal
- Know and understand the Solicitation Cycle
- Access funding opportunity resources
- Organize and plan for grant writing
- Avoid common reasons for not being funded

Big Questions
- What is your area of study?
- What would you like to learn from today’s training?
- How many grants have you submitted?
- How many of you have been funded?

The Ohio State University Foundation Total Fundraising Activity

The Ohio State University
Office of Research

The Ohio State University
Office of Research

The Ohio State University Foundation
Total Fundraising Activity

Foundation Gifts
Corporate Gifts
Other Sources

Grant-Making Organizations

Government
- Federal – NIH, NSF, DOD, NEA
- State – Jobs Ohio, Ohio Dept of Ed
- County, Municipalities

Private
- Non-Profit – Sloan Foundation, Columbus Foundation
- For Profit – AEP, Honda, General Electric

The Ohio State University
Office of Research

9/8/2014
Office of Research
Funding & Research Development

• Assistance with finding funding, locating collaborators, and leveraging Ohio State’s resources
• Coordination of the limited submission process, Ohio State’s internal nomination process

Jeff Agnoli
agnoli.1@osu.edu or (614) 292-6269
Office of the Vice President Research
208 Bricker Hall, 190 N. Oval Mall
Columbus, Ohio 43210

Funding and Research Development (go.osu.edu/funding)

• SPIN Funding Opportunities Database
  • www.infoedglobal.com > SPIN
• Research Development and Grant Writing Newsletter
  • http://go.osu.edu/grantwritingnews (OSU login required)
• Federal Grants and Contracts
  • http://grants.gov
• Research Databases
  • http://library ohio-state.edu/screens/databases.html

Internal Funding:

• Knowledge Management (KM) Data
  • http://kmdata.osu.edu (faculty expertise)
• Internal Funding Opportunities
  • College, institute/center, and department web sites
• Sponsored Program Officers
  • http://osp.osu.edu/spos
• Google Alerts and Google Scholar searches
  • http://google.com

Foundation Center (funding from community agencies, corporations, and families)

• Available through college development officer
• Also accessed through University Libraries catalog

Contacts for Corporate and Foundation Relations

• Foundations
  • Emily Irwin, irwin.290@osu.edu
• Corporations
  • Matt Meyer, meyer.31@osu.edu

Every proposal requires:

• ePA-005 – Authorization to Seek Off-Campus Funds form with appropriate signatures
• Principal Investigator (PI) Status Eligibility
• Approval for use of human subjects, animals, or other institutional clearances (research risks)
• Conflict of Interest requirements
• Appropriate facilities and administrative (F&A) costs as allowed by sponsor
• The Ohio State University or The Ohio State University Foundation is listed as the applicant and contractual entity
University Requirements

Proposal may also require:
• Documentation that sufficient research space is available
• Documentation of sources of cost sharing, if included in proposal
• Faculty salary recovery if required by college

Ohio State’s federal agency proposal development and submission system
• Automates some tasks, e.g. completion of forms; facilitates collaboration, checks for commons errors and/or missing information, etc.
• Recommend submitting proposal at least 3-5 days before the actual deadline

What is the Difference between...

Office of Sponsored Programs (OSP)
• Does not have a 501(c)(3) designation
• Reporting requirements help determine who submits Government grants (federal, state, local)
• Facilities and Administration Costs where applicable
• http://osp.osu.edu

The Ohio State University Foundation
• Does have a 501(c)(3)
• Individual donors
• Foundations
• Corporate funding
• Six month check hold (administrative costs)
• http://giveto.osu.edu

2011 CONTRIBUTIONS: $290.89 BILLION
BY SOURCE OF CONTRIBUTIONS
($ in billions - All figures are rounded)

A Gift

A Contract

A Grant
What is a Gift?

A gift is a contribution or donation made on a non-competitive basis and may obligate the recipient to produce specific results, e.g., naming rights and other university benefits.

Processed by the Ohio State University Foundation.

What is a Contract?

Contract: legally binding agreement between one or more sponsors and the grantee

- Outlines specific goals and requirements for goods and/or services to be provided by the grantee
- The relationship between the sponsor and the grantee is one of procurement
- Processed by the Office of Sponsored Programs

What is a Grant?

Grant: an assistance award, generally financial in nature, given for the implementation of a specific task

- Generally not as restrictive as a contract
- Processed by the Office of Sponsored Programs
- Processed by the Ohio State University Foundation if a 501 (3) (c) nonprofit organization requirement is listed in the guideline

The Solicitation Cycle

Identification

Find people or organizations that believe in your mission, non-profit enterprise, and have the capacity to make a significant contribution.

Research

Involves understanding the motivations and interests of your prospects to determine whether you and they share an interest in the same objective.

- Information may be found in the public record.
- The best information gathering tool is a conversation!
Strategic planning in a charitable gift setting involves conceiving the appropriate method of engaging your prospect in your organization.

- Understand that philanthropic giving is tangible evidence of an emotional event.

Cultivation

- Enables philanthropists to learn about your organization, its leadership, its vision for the future, and the efficacy of its past programs.
- The gift becomes a natural resolution to a mutually recognized problem.
- Remember you are trying to establish a life long relationship. Even after a grant is received, you want to continue to cultivate existing relationships.

Solicitation

- Ask for the gift (include $ request in paragraph 1-2 of letter of intent/inquiry (LOI) or proposal
- Be sure to provide exactly what they request (follow the guidelines)
- State your case effectively and remember to say thank you!

Stewardship

- Inform sponsor of your organization’s success in delivering the service for which you solicited the gift.
- Usually grants require reporting (fiscal and programmatic)
- Say thank you!

Renewal

- Once sponsors make the first gift they are inclined to give again.
- To earn a donor’s repeat generosity, you must first do an outstanding job of service delivery.

Developing Your Proposal Begins with a Good Idea

- Does it address an important problem?
- Will scientific knowledge be advanced and sustained?
- Does it build upon or expand current knowledge?
- Is it feasible...
  - to implement?
  - to investigate?
Additional Proposal Considerations

- Have you researched the sponsor’s web site? Has it already been funded?
- Have you selected the right sponsor?
- Have you followed all guidelines?
- Is your project in alignment with the sponsor’s mission?
- Is the significance of your project clear?
- Is the evaluation of your program sound?
- Is the budget realistic and includes only essential costs?

---

Think

Act (Plan)

Write

---

So WHY Plan?

You’re more likely to get...

- A compelling scientific question
- Appropriate sponsor
- Appropriate review committee
- Adequate time to complete  
  ➢ A major stress reducer, no need to wait to get started

…a better grant application

---

Components of a Grant Proposal

- Cover Letter (write last)
- Executive Summary
- Problem Statement
- Project Description (includes evaluation)
- Budget
- Organizational Information (ask department/college for assistance)
- Conclusion
- Appendix
Components of a Cover Letter

- Reference conversations/past contacts
- Make the request (including the ask amount)
- Describe what is in your proposal package (narrative, appendix)
- Offer to answer questions/meet
- Institutional signature(s)

Executive Summary Components

- Need Statement
- Project Description
- Funding Requirements/Budget
- Expertise/Organizational Info

Problem or Need

- How it relates to the goal and mission of the project
- The applicant’s capacity to make a change in the condition
- Who is experiencing the problem
- Project purpose

Project Description

- Goals and objectives
- Planned activities (outputs)
- Project timeline (logic model)
- Evaluation and sustainability plan

Sample Logic Model

- Depending on which organization (OSP or CFR) submits the proposal, additional institutional information may need to be submitted, e.g., list of board members, audited financial statements, etc.
Conclusion

- Final appeal
- Reiterate what your nonprofit wants and why it is important

1. Expense Information
- Personnel
- Non-personnel
- Overhead

2. Income Information
- Earned income
- Grants and Gifts

3. Budget Narrative and/or Justification

Appendix

- Additional information they may request, examples memorandum of understanding (MOU) or letters of support.
- Additional documents which add to the credibility of the proposal, e.g., journal articles, CVs, etc. (refer to guidelines)

Scientific Proposal Contents

- Abstract
- Methods
- Expected Results
- Potential problems and plans for resolution
- Budget and justification
- Personnel and their qualifications
- References cited
- Letters of support

Why Are Proposals Not Funded: Common Proposal Weaknesses

- Project not “innovative” or “transformative” enough; questionable importance
- Project not logical; planning is lacking
- Lack of preliminary data; need not documented
- Staff unqualified; team lacks expertise
- Overly ambitious; project timeline unrealistic
- Key point: make it easy for reviewers to understand and read

NSF: Return Without Review

- Inappropriate for funding by the NSF
- Insufficient lead-time before activity is to begin
- Does not separately address merit review and one-page Project Summary
- Already received a “not invited” response; duplicates another proposal already awarded
- Does not meet requirements, i.e., page limits, formatting, etc.; not responsive to program guidelines
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
  - Feasibility unsupported
- Poor writing
- Applicant track record weak or lacking appropriate expertise
- Approach flawed

Hallmarks of an Outstanding Grant Application

- Strong significance to an important problem; IMPACT is high; high degree of novelty and innovation; clear rationale
- Strong track record by a well-qualified applicant
- Relevant and supportive preliminary data
- Clear and focused approach that provides unambiguous results
- Careful attention to details:
  - Fonts, clarity of data, spelling, etc.

How To Assure That Your Grant Gets Funded?

- Good ideas, well-presented always win
- Think and write clearly
- Be complete but not verbose
- Never lose sight of the significance; point to the impact
- Pay attention to details
- Collaborate with other investigators
  - Fills gaps in your expertise and training
  - Add critical skills to your team
- “Team Science” is powerful

The Peer Review Process

- Incorporate review criteria in your subheadings
- Know that reviewers are exceptionally busy people
  - Typically do not read proposal all at once
  - Most may not have expertise in your field of study
- Ask for a list of reviewers when available; review their funding history and publications
- Talk with colleagues who have served as peer reviewers and/or volunteer to serve as a reviewer

Science of How You Communicate

- Use active voice rather than passive voice
- Minimize the separation between subject and verb; use short, concise sentences
- Articulate the direction action in the verb when appropriate
- The subject whose story is being told should be at the beginning of the sentence in the topic position
- New, important (exciting!) information should be at the end of the sentence in the stress position

There is not a CLEAR HYPOTHESIS, or WELL DEFINED GOALS

- Provide a focused hypothesis, objectives
- Describe the importance and relevance of your problem
- Be clear on how your project will move the field forward
**Hypothesis**: The proposed research seeks to examine the relationship between neurotransmitter A and neurotransmitter B signaling in Brain Region of Interest and in vivo electrophysiological measures of Brain ROI output during the transition from chronic morphine exposure to morphine withdrawal... additionally seeks to determine whether putative Brain ROI projection neurons exhibit altered basal and behaviorally-correlated firing profiles during these states... finally seeks to determine whether the observed behavioral, neurochemical, and neurophysiological indices associated with morphine dependence and withdrawal are dependent on Neurotransmitter A projections to the Brain ROI.

**Sample NIH Grant #1**

**Grant #1 (Specific Aims)**

**SA #1**: Examine alterations in Brain ROI neurotransmitter A and neurotransmitter B efflux in response to acute morphine challenge and withdrawal in morphine-dependent rats

**SA #2**: Examine alterations in Brain ROI single-unit neuronal activity in response to acute morphine challenge...

**SA #3**: Determine the sensitivity of withdrawal-associated neurotransmitter A efflux, single unit neuronal activity, and withdrawal-associated behaviors to lesions of the neurotransmitter A afferent inputs

---

**Reviewer Comments:**

1. This application appears to lack a hypothesis driven from a specific mechanism.
2. Enthusiasm... dampened by the lack of a specific mechanism
3. ...the proposal begins to look more like a collection of experiments where the applicants are simply listing experiments according to their expertise in specific techniques
4. ...overambitious nature of the project

The specific aims do **NOT TEST** the Hypothesis, or the specific aims **DEPEND** on results from previous aims

The best proposals are those with independent specific aims that address your hypothesis using different approaches

---

**Hypothesis**: The increase in brain receptor subunits after chronic morphine is an adaptation to reduced tonic neurotransmitter release in the brain region of interest and elevates the threshold for opioid analgesia.

**Objective**: Study is to design opioid-based pain relief paradigms with extended analgesic efficacy and reduced risk of abuse.

**Purpose**: To determine whether these brain receptors are good targets for “anti-tolerance” drugs

**Grant #2**

**SA #1**: Determine the anatomical location(s) of chronic morphine-induced changes in brain receptor subunit levels

**SA #2**: Examine the role of brain receptor subunits in opioid-induced behaviors other than analgesia

- R01
- Requested $225,000 direct costs / 5 years
Reviewer Comments:
1. Unfortunately, several of the experiments proposed do not directly test the hypothesis and may or may not aid in our further understanding of opioid tolerance.
2. ...it is not clear whether such changes would correlate with antinoceptive function
3. ...there is a lack of preliminary data determining whether such studies can be accomplished and whether any significant changes can be measured
4. ...the literature reports 15 to 20 different mechanisms demonstrating the inhibition of opioid antinoceptive tolerance, yet none of these are addressed
5. ...studies proposed in aim 2 lack rationale

Hypothesis: Chronic drug exposure upregulates the expression of Factor X, which triggers and sustains the exocytotic trafficking and surface expression of functional Receptor A

Purpose: To investigate the molecular mechanisms for Factor X-induced Receptor A trafficking

SA #1: Determine the signaling pathways mediating Factor X-induced Receptor A trafficking
SA #2: Determine Factor X involvement in drug-induced Receptor A trafficking
SA #3: Determine the synaptic sites of Receptor A trafficking and Receptor A-B interactions
SA #4: Determine the behavioral significance of emergent Receptor A and behavioral Receptor A-B interactions

Reviewer Comments:
1. Strengths are numerous and include novel and innovative hypotheses, sound experimental design using multidisciplinary approaches, a highly qualified investigator and research team, and a high likelihood of meaningful findings
2. Strengths include the significance of the central hypothesis, the well-designed experimental plan, supportive preliminary data...
3. ...the rationale for the studies are clearly delineated, appropriate controls are in place, scope of the studies is appropriate, and there is ... complete discussion of possible limitations of some approaches and how findings will be interpreted

Contact

Jeff Agnoli (agnoli.1@osu.edu or 614-292-6269)
Education, Funding and Research Development
Office of the Vice President for Research
208 Bricker Hall / 190 N Oval Mall
Columbus, Ohio 43210

Emily Irwin (irwin.290@osu.edu or 614-688-2180)
Director, Foundation Relations
The OSU Foundation, Office of Corporate and Foundation Relations
1480 West Lane Avenue
Columbus, Ohio 43221