



Grant Writing 101

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Research Funding & Development Services

Why know about grants?

- OHSU researchers brought in \$392 million in FY 2010!
- We have about 1100 principal investigators and more than 4000 research projects
- That's a lot of research!

Key elements to grant success

- Plan your work
- Have the right elements in place
- Understand OHSU processes
- Know your audience
- Have a great idea and strong science
- Write a great application

Plan your work

- Find funding opportunity
- Investigator-initiated grants vs. RFAs
- Work backwards from your deadline: it takes awhile to write a good grant. Months.
- Have good preliminary data, even when it says you don't need it.

Have the right elements in place

NIH applications are scored on...

- Significance
- Investigators
- Innovation
- Approach
- Environment

PAR & RFA: May add questions to each scored or additional criterion

Have the right elements in place

- Collaborators?
- Mentors?
- Letters of support?
- Transcripts?
- Compliance requirements?
- Facilities, equipment, study coordinators, scientific resources?

Understand OHSU processes

- Befriend your department administrator, GCA, and other university officials.
- Know the PPQ (proposed project questionnaire)
- Know when you need approvals for compliance, Foundation clearance, Limited Submission
- Understand budgets and cost sharing
- OCTRI?
- Research Funding & Development Services can help!

Know your audience

- What is the purpose of the funding agency? What do they want to achieve?
- Who is reviewing your application—a lay audience? Peers? Peers at OHSU?
- Write the application that you would want to read.
- Delivering information \neq communication

Have a great idea and strong science

- All grant writing is problem solving.
- Reviewers have to like your idea, and it has to be based on something (preliminary data) that makes the project look feasible.
- Don't propose to develop the test and then test the test. Develop the test, then propose to use it.

Needs vs. Research

- We need to establish a clinic for children with tuberculosis.
- Coordinated clinical care for children with tuberculosis will improve survival by 50%.

Needs vs. Research

- We need to identify biomarkers for lung cancer to improve survival.
- BRCA 2 status is correlated with reduced lung cancer survival rates.

You need a strong hypothesis

A prediction is not a hypothesis.

Prediction vs. Hypothesis

- If I let go of this pen, it will drop.

Prediction vs. Hypothesis

This pen will drop.

- ????????

**This pen will drop
because.....**

- It is subject to forces of gravity?
- Someone tied a string around the end of it?
- Invisible demons are stealing it away?

Grant 1

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*.

You need good, feasible aims

- Characterize the obesity of the POMC null mouse.

You need good, feasible aims

- Determine the extent to which leptin is downregulated by POMC ablation
- Determine the extent to which insulin resistance is affected by POMC ablation.
- Measure whether POMC null mice are more susceptible to inflammation.

Write a great application

- Make it easy to read
- Make sure your data are beautiful
- Follow the guidelines in the application—
all the guidelines, not just the science part
- Make sure the budget and timeline are
reasonable

Where to get help?

Research Funding & Development Services

www.ohsu.edu/xd/research/administration/research-funding-development/index.cfm

Contact us: funding@ohsu.edu

Research Development & Administration

www.ohsu.edu/xd/research/administration/index.cfm