BRIDGING THE GAP BETWEEN RESEARCH DEVELOPMENT AND RESEARCH ADMINISTRATION

AGENDA

• WELCOME

• OUESTIONS

- CURRENT LANDSCAPE
- IDENTIFYING FUNDING OPPORTUNITIFS
- DEVELOPING TECHNICAL CONCENTRATION
- FEDERAL FOCUS: NSF & NIH

CURRENT LANDSCAPE

- Common sources of funding have been limited
- As funding declines so does success rates
- Foundation Funding and new/unique funding sources have become more important but reliance on such funds has downsides

CURRENT LANDSCAPE

- Increased administrative burden for researchers results in less time for research
- More time spent finding funding or grant writing
- Has led to the specialization of Research Development Services both as a stand alone office or within the research management office



Recovery Act funding. © 2016 AAAS





CURRENT LANDSCAPE WHAT IS RESEARCH DEVELOPMENT?

"Research Development encompasses a set of <u>strategic</u>, <u>proactive</u>, catalytic, and capacity-building activities designed to facilitate individual faculty members, teams of researchers, and central research administrations in attracting extramural research funding, creating relationships, and developing and implementing strategies that increase institutional competitiveness."

Not to be confused with Research AND Development



IMPLEMENTING RESEARCH DEVELOPMENT

- Start to communicate funding opportunities
- Websites
- Newsletters
- Social Media
- Office hours
- Grant Writing services
- Peer review services
- New investigator support



Act as your own RD Officer.

IDENTIFYING FUNDING OPPORTUNITIES HOW TO IMPLEMENT RESEARCH DEVELOPMENT?

1. Strategic Research Advancement

2. Communication of Research and Research Opportunities

a. To Researchers

b. To Research Managers

c. To Administration

- 3. Enhancement of Collaboration
- 4. Proposal Support Functions: the Value Add

Again, act as your own RD Officer.



HOME / FIND FUNDING /

Funding Opportunity Databases

Pivot/Community of Science (COS)

Searchable database of federal and private funding opportunities in all fields. Guide (PDF)

Foundation Directory Online (FDO)

Searchable database that contains a wealth of information on foundations and t ar <u>Guide (PDF)</u>

Grants.gov

Searchable database of all grant opportunities offered by Federal Agencies

NIH Research Portfolio Online Reporting Tool (RePORT)

Provides access to reports, data, and analyses of NIH research activities, inclu awarded, expenditures, and the results of NIH supported research.

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SPIN

Searchable database of federal and private funding opportunities in all fields.

Not novel for business, but novel for research: Crowdfunding.



Entities like Benefunder and Experiment.com are ways researchers and Universities have leveraged crowdfunding.

Must be careful with terms.

"Reverse Engineer" funding opportunities:

- Look at acknowledgements listed in articles/papers in your field; check for how that research was funded.
- Look at citations and references; check for how those projects were funded or supported

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Use agency award databases:

- NIH: Research Portfolio Online Reporting Tools (RePORT)



REVIEW ABSTRACTS (Will also prove useful to see funded examples)

The art of writing a proposal (or request) for support which successfully <u>advocates</u> for a particular line of inquiry, research or investigation while <u>aligning</u> with a funder's mission, ethos or interests.



According to Przeworski and Salomon (1995), funders seek to see four questions addressed:

- 1. What are we going to learn as a result of this project that isn't known now?
- 2. Why is that worth knowing?
- 3. How will we know something was discovered achieved?
- 4. Does author/proposer have means to do this?

Prezeworski, A. and Salomon, F. 1995. Some Candid Suggestions for Applications to Social Science Research Council Competitions.

https://s3.amazonaws.com/ssrc-cdn2/art-of-writing-proposals-dsd-e-56b50ef814f12.pdf

According to Przeworski and Salomon (1995), funders seek to see four questions addressed:

I. What are we going to learn as a result of this project that isn't known now?

2. Why is that worth knowing?

GOALS/AIMS/OUTCOMES

SIGNIFICANCE

EVALUATION

RESOURCES/EXPERTISE

3. How will we know something was discovered achieved?

4. Does author/proposer have means to do this?

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Take these core points & pivot for each funder.

ELEMENTS:

- Abstract Be Explicit.
- Impact Statement Who cares?
- Project Narrative -
 - Introduction
 - Background
 - Problem Statement
 - Significance
 - Evaluation
- Budget Reasonable
- Timeline/ Gantt



TIPS for SUCCESS:

- Write the abstract and introduction last.
- Careful with titles be as explicit as possible.
- Assume sophisticated peer readers but may not be in exact niche field.
- Write for skeptics
- Preempt reviewer questions
- Reviewers make up minds quickly
- Writing style declarative, short sentences.

Top Tip: Include a cover letter where a specific peer-review panel or section is requested. Why leave to chance?

Ok, that helps with "advocacy for a particular line of research," but what about "aligning with funder's mission, ethos and interests"?

- 1. Identify mission of agency/funder what are they all about?
- 2. Address specific FOA/RFP criteria
- 3. "Selling points"
 - Technical Expertise
 - Institutional Resources
 - Societal Benefit

Bottom Line: Self promotion can be difficult.

DEVELOPING TECHNICAL CONCENTRATION IMPACT STATEMENTS

Broader Impacts (NSF)

How well does the activity advance discovery and understanding while promoting teaching, training and learning?

How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?

To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships?

Will the results be disseminated broadly to enhance scientific and technological understanding?

What may be the benefits of the proposed activity to society?

DEVELOPING TECHNICAL CONCENTRATION IMPACT STATEMENTS

Broader Impacts (NSF)

Measurement of Impact

Policy & Institutional Documents

Cultural Cognition of an Idea ("Meme Factor") CITATIONS H-Index # of Trainees/Students

> Social Media References

New/Media References

DEVELOPING TECHNICAL CONCENTRATION ADDITIONAL TIPS

- Use "editing services" and/or colleagues to review
- Pay attention to formatting
 - 1. Biosketches/CVs
 - 2. Mentoring Plans
 - 3. Letters of Support
- Relationship building with Program Officer (PO) is KEY!!
- Based on the agency, find out who makes the funding decision. For example NSF, peer-review panel meets and makes recommendation, but PO makes actual decision. NIH is different – funding decisions are based on a point scheme earned by peer-review panel.
- Faculty commonly afraid of making missteps or mistakes but shouldn't be!
- DON'T ask questions that are already addressed in RFP/FOA

DEVELOPING TECHNICAL CONCENTRATION ADDITIONAL TIPS

- Researchers should review funded abstracts. Often available online i.e. REPORTER (NIH), NSF database.
- REPORTER is a great tool to use during Proposal development:
 - 1. what fits within the agency's mission
 - 2. view assignments for study sections (always complete this "requested study sec " in proposal; don't assume CSR will assign it correctly)
 - 3. view <u>funded</u> abstracts.
- NSF Awards database:
 - 1. Get a sense of your directorate.
 - 2. View awarded projects by directorate
 - 3. Note average award size, and other dimensions (you don't want to be too far out of average grant size.
- Pay Careful Attention to Titles:
 - 1. Should be descriptive enough to indicate the topic of proposal
 - 2. Avoid clever taglines or other aspects.

U.S. AGENCY GETTING TO KNOW THE FEDERAL FUNDERS

• 26 Federal Funding agencies but not all common for grant/contract support, especially for foreign researchers

U.S. FEDERAL FUNDING OPPORTUNITIES	13
FUNDER/SPONSOR: U.S. Department of Health & Human Services (DHHS)	14
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U.S. AGENCY GETTING TO KNOW THE FEDERAL FUNDERS

- BILAT 4.0 Report: US Funding
 Opportunities for EU Researchers
- Available at goo.gl/aYTBZO
- Provides:
 - Sponsor Name and Type of Funding
 - Foreign Research Allowance
 - Relevant Academic Mission
 - Structure of Organization



REPORT ON U.S. FUNDING OPPORTUNITIES FOR EUROPEAN RESEARCHERS

If not direct awardee, non-US researchers commonly partnering with US researchers as (a) subawardee, (b) co-funded party or (c) collaborative party.

FEDERAL FOCUS: NATIONAL SCIENCE FOUNDATION (NSF)



7 Directorates Biological Sciences (BIO) Geosciences (GEO) Computer and Information Science and Engineering (CISE) Education and Human Resources (EHR) Engineering (ENG) Mathematical and Physical Sciences (MPS) Social, Behavioral and Economic Sciences (SBE)

- Funds research and education in most fields of science and engineering.
- Accounts for about ¼ of federal support to institutions for basic research
- Funding Opportunity Announcements (FOAs) and Grants.gov
- Office of International Science and Engineering (OISE) crosscutting program which serves all of the directorates to promote and manage international science and engineering activities

FEDERAL FOCUS: NATIONAL SCIENCE FOUNDATION (NSF)



Key Funding Opportunity for Non-US researchers

Partnerships for International Research and Education (PIRE) is an NSF-wide program that supports international activities across all NSF-supported disciplines. The primary goal of PIRE is to support high quality projects in which advances in research and education could not occur without international collaboration.

FAQ: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=ns f14088

FEDERAL FOCUS: NATIONAL SCIENCE FOUNDATION (NSF)

Key Funding Opportunity for Non-US researchers



Collaborative Research in Computational Neuroscience (CRCNS)

- Computational neuroscience provides a theoretical foundation and a rich set of technical approaches for understanding complex neurobiological systems.
- Through the CRCNS program, the National Science Foundation (NSF), the National Institutes of Health (NIH), the German Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF), the French National Research Agency (Agence Nationale de la Recherche, ANR), and the United States-Israel Binational Science Foundation (BSF) support collaborative activities that will advance the understanding of nervous system structure and function, mechanisms underlying nervous system disorders, and computational strategies used by the nervous system.

FEDERAL FOCUS: NATIONAL INSTITUTE OF HEALTH (NIH)



- Largest source of funding for medical research in the world
- Robust research policies and funding schemes (R01s, K01s, T32s)
- Funding Opportunity Announcements (FOAs) and Grants.gov
- Funds Non-US Applicants Directly as well as through Subawards

FEDERAL FOCUS: NATIONAL INSTITUTE OF HEALTH (NIH)

Key Funding Opportunity for Non-US researchers

Parent R01 permits foreign Institutions to apply.



Foreign Institutions

Non-domestic (non-U.S.) Entities (Foreign Institutions) are eligible to apply. Non-domestic (non-U.S.) components of U.S. Organizations are eligible to apply. Foreign components, as <u>defined in the *NIH Grants Policy Statement*</u> (http://grants.nih.gov/grants/guide/url_redirect.htm?id=11118), are allowed.

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QUESTIONS?

Jennifer A. Ponting Harvard University jennifer_ponting@harvard.edu