BRIDGING THE GAP BETWEEN RESEARCH DEVELOPMENT AND RESEARCH ADMINISTRATION
AGENDA

• WELCOME
• CURRENT LANDSCAPE
• IDENTIFYING FUNDING OPPORTUNITIES
• DEVELOPING TECHNICAL CONCENTRATION
• FEDERAL FOCUS: NSF & NIH
• QUESTIONS
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.
University R&D Funding by Source

expenditures in billions, FY 2016 dollars

Ten Fields With Highest Share of Federal Funding in FY 2014
(university research funded, millions of dollars)

CURRENT LANDSCAPE
WHAT IS RESEARCH DEVELOPMENT?

“Research Development encompasses a set of strategic, proactive, 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.
IDENTIFYING FUNDING OPPORTUNITIES
HOW DO I FIND THEM?

- NIH/NSF/DOD etc.
- Private Foundations
- Associations
- Professional Orgs

- PIVOT
- Spin
- Pure Funding Discovery
- GrantsWire
- Foundation Directory Online

- Direct Source Material
- Paid Subscriptions
- Federal Sources-bulletins
- Unpaid Subscriptions

- Grants.gov
- Federal Register
- CFDA
- FEDBizOpps.Gov

- Digests
- Academic Listservs, e.g., RESADM-L
- Euraxess

SPIN Funding Opportunities
The World’s #1 Funding Opportunities Database
IDENTIFYING FUNDING OPPORTUNITIES
HOW DO I FIND THEM?

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
Guide (PDF)

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, including
awarded, expenditures, and the results of NIH-supported research

SPIN
Searchable database of federal and private funding opportunities in all fields.
IDENTIFYING FUNDING OPPORTUNITIES
HOW DO I FIND THEM?

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.
IDENTIFYING FUNDING OPPORTUNITIES
HOW DO I FIND THEM?

“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
IDENTIFYING FUNDING OPPORTUNITIES
HOW DO I FIND THEM?

Use agency award databases:
- NIH: Research Portfolio Online Reporting Tools (RePORT)

*REVIEW ABSTRACTS* (Will also prove useful to see funded examples)
Developing Technical Concentration

What is grantsmanship?

The art of writing a proposal (or request) for support which successfully advocates for a particular line of inquiry, research or investigation while aligning 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?


Developing technical concentration

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Take these core points & pivot for each funder.
DEVELOPING TECHNICAL CONCENTRATION
WHAT IS GRANTSMANSHIP?

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?
DEVELOPING TECHNICAL CONCENTRATION
WHAT IS GRANTSMANSHIP?

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

References

- Social 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’Task 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 funded 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 FUNdereS

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

### U.S. FEDERAL FUNDING OPPORTUNITIES

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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/aYTBZ0
- Provides:
  - Sponsor Name and Type of Funding
  - Foreign Research Allowance
  - Relevant Academic Mission
  - Structure of Organization

*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)

- 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

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)
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.

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

27 Institutes and Centers (e.g., NIA, NIAID, NCI, etc.)
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 defined in the NIH Grants Policy Statement [http://grants.nih.gov/grants/guide/url_redirect.htm?id=11118], are allowed.

Required Registrations
QUESTIONS?

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