Grant Writing Basics

Frances Yee, PhD
Coordinator of Research Programs

Peh Hsia, CRA
Manager, Training & Program Development

Sponsored Research and Program Development
www.rockefeller.edu/sr-pd
February 22, 2012

Resources for Finding Funding Opportunities

- University Sponsored Research & Program Development (SR-PD)
  - Your Grants Management Specialist
  - SR-PD Website
  - SR-PD Emails
- Online resources such as Community of Science (COS), InfoEd – SPIN, Grantsnet and others
- Mentor and peers

Where to Apply

- Federal
  - NIH
  - NSF
  - Department of Defense
  - Other agencies as funding programs are made available
- Foundations
- Industry
- Internal (via Development)

Strategic Resources

- Mentor
- Peers
- RU SR-PD
  - Forms and format
  - Budget (e.g. personnel effort & costs, indirect costs)
  - Boilerplates
  - Your Grants Management Specialist
  - Website
- Sponsor's website
- NIH
  - RePORT
  - Program Official
  - Award trends and success rates
  - Office of Extramural Research

Types of Funding

- Fellowships
- <u>Career Development</u> (ex. NIH K08 and K23; non-NIH)
- <u>Research Grants</u>
  - Small (ex. NIH R03)
  - Exploratory (ex. NIH R21)
  - Individual research grants (ex. NIH R01)
  - Internal Pilot Study grants (ex. CTSA)
  - Collaborative center/program grants
  - Non-NIH sources using similar mechanisms

NIH Career Development Awards

- **K08** Mentored Clinical Scientist Research Career Development Award supports supervised research career development experience in the fields of biomedical and behavioral research
- **K23** Mentored Patient-Oriented Research Career Development Award supports investigators committed to research on patient-oriented research
- **K99/R00** Pathway to Independence Award

NIH Career Development Awards Summarized

	K08	K23	K12	K99/R00
Citizenship Eligibility	USA or Permanent Resident	USA or Permanent Resident	USA or Permanent Resident	Not limited to USA or Permanent Resident
Length of Project Period	Up to 5 years mentored	Up to 5 years mentored	Up to 5 years mentored	Up to 2 years mentored
Estimated Range of Annual Direct Costs	$123,000 - $224,000	$123,000 - 224,000	Varies (funds multiple scholars)	$90,000 (check Table of I/C contacts)
Minimum effort committed to research	75%	75%	75%	75%
Letters required	Mentor plus 3 referees	Mentor plus 3 referees	None	Mentor plus 3 referees
Participating NIH Institutes	Most institutes	Most institutes	NCI, NEI, NICHD, NIDA, NIGMS, NINDS	Most institutes

Tips on
NIH Career Development Awards

- Require a minimum effort of 75% on research
- Strong/experienced mentor(s) is critical
- Training plan must be clear, focused, as well as interesting and practical
- Biosketches should reflect the potential of the candidate and the qualifications of the mentor

NIH Career Development Awards
Limit of Cumulative K-support

- Mentored Clinical Scientist Research Career Development Award (K08) – <mark>NIH institutes limiting cumulative support</mark> (6 years) on institutional/K12 & K08 grants
  - NHLBI, NICHD, NIDCD (7 years w/PO permission)
- Mentored Patient-Oriented Research Career Development Award (K23) – <mark>NIH institutes limiting cumulative support</mark> (6 years) on institutional/K12 & K23 grants
  - NHLBI, NICHD, NIDCD (7 years w/PO permission), NIDDK, NIMH

DOD Congressionally Directed Medical Research Program (CDMRP)

- No citizenship requirements
- Some research programs have career awards and many are open to investigators at all academic levels
- Pre-announcements currently available
  - Breast Cancer Research Program – Idea Award ($375K for 2 years) does not require preliminary data
  - Ovarian Cancer Research Program – Pilot Award ($250K for 2 years) for investigators at or above postdoctoral level
  - Prostate Cancer Research Program – Idea Development Award for New Investigators ($225K for 3 years)
  - Peer Reviewed Medical Research Program – 22 topic areas for FY2012 (Arthritis, Dystonia, Drug Abuse, Epilepsy, Food Allergies, Fragile X Syndrome, Inflammatory Bowel Disease, Listeria Vaccine for Infectious Disease, Lupus, Malaria, Neuroblastoma, Osteoporosis, Paget's Disease, Polycystic Kidney Disease, Post-Traumatic Osteoarthritis, Scleroderma, Tinnitus, and Tuberculosis)

Early Stage of Proposal Planning

- Start early, approx. 6-9 months before deadline
- Review the funding program/announcement
- Research recently <u>funded proposals</u>
- Find out <u>success rate</u> at target agency/institute
- Discuss your research/proposal with your mentor
- Contact (e.mail) the Program Official/Director – determine/confirm Institute/Center assignment
- Attend grant writing workshops at RU & national mtgs/conferences
- Secure reference letters (for K-mechanism applications)
- Register with sponsor
- Work with your Grants Management Specialist

Preparing the Proposal

- Review scope of the funding opportunity announcement
- Make note of the deadline
- Verify eligibility with your Grants Management Specialist
- Read closely the guidelines/instructions – including special submission requirements
- Design your outline and research plan according to the sponsor's instructions
- Fully address the review criteria and in the order presented by the sponsor

Compliance Issues: Human Subjects

- Research protocol must be submitted and reviewed by the University Institutional Review Board (IRB) before research can start
- Individuals involved with human subjects must have Protection of Human Subjects Certification
- Address sponsor's requirements – no page limit; describe collection of human subjects info/specimens for all groups
- Check http://clinfo.rockefeller.edu/ for more information
- Exempt (E4) human subjects research – include statement regarding source of tissue samples/data, *e.g.* pathology or medical records, and that there are no identifiers linked to study subjects

Additional Elements (1)

- Research plan
  - Select agent research – hazardous biological agents and toxins identified by HHS or USDA
  - Consortium/contractual arrangements
  - Resource sharing
    - Data sharing plan required if annual direct costs higher than $500,000
    - Model Organism sharing plan required if proposal includes development of a model organism
  - Letters of Support/Collaborations
- Description of resources and environment – refer to RU Resources boilerplate
- Cover letter - request assignment to Institute/Center and/or study section, include name of program/review officers

Additional Elements (2)

- Easy to Read
- Format
  - Font type and size
  - Margins
- Page limits
- Accurate – check figures, tables, references cited
- Appendix materials – follow guidelines

Submission Process

- Complete University "<u>routing form</u>"
- For <u>full review and institutional sign-off</u>, submit full packet to SR-PD at least 5 business days before sponsor's deadline
- If paper submission: after institutional sign-off, send the required # of copies and forward a final copy to SR-PD
- If electronic submission: final copy will be submitted by Authorized Organizational Representative (AOR)

Post-submission

- Receive confirmation of receipt and assignment
- Note sponsor's decision date
- Receive summary statement
- If fundable score: submit "Just-in-Time" information and address any pending issues on your application; resolve any overlap of science and effort
- If low score or unscored: evaluate the reviewers' comments; speak with your Program Official; prepare resubmission and work with your GMS

Managing Awarded Grants

Work with SR-PD and Finance on post-award management of your grant:

- Review the award documents
- Note scientific reporting requirements and other terms and conditions
- Follow funding restrictions/requirements
- Work with SR-PD and Finance if you need to revise your budget and if approval is required by sponsor
- Brief your mentor and lab administrator and keep them informed of your award and progress

All financial reporting is handled by University Finance department.

Award Management Contacts

- Pre-Award Issues x7791
- Post-Award Issues
  – Cindy Fuqua x8055 at SR-PD
  – Research Administration x8308 at Finance

Helpful References

- Sponsored Research and Program Development http://www.rockefeller.edu/sr-pd/index.php?page=index
- New Investigators - http://grants.nih.gov/grants/new_investigators/
- Center for Scientific Review http://cms.csr.nih.gov/ResourcesforApplicants/
- NIH "Writing Your Application" http://grants.nih.gov/grants/writing_application.htm
- InfoEd https://spas.rockefeller.edu/login.asp
- "Research Proposals: A Guide to Success"m 3rd Edition
- "Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty", 2nd Edition

Questions and Suggestions