

Job Applications and Research Proposals

- Expectations: One page summary of your program, plus 3 (possibly 2) individual research proposals (3-5 pages each).
- Your CV, references, and written proposals get you the interview. Your seminar and proposal presentations are the most critical elements in being successful in an interview.
- Important to have unifying (synergistic) plans/goals (not simply collection of random ideas).
- Don't be afraid to admit that you don't know something if asked.

Starter Grants

- Two Flavors: Those that don't require preliminary results and those that do.
- PRF starter types of grants often go to assistant professors but must be loosely related to Petroleum.
- Young Investigator: These are offered by NSF (Career Award), ONR (Office of Naval Research), ARO (Army Research Office), DARPA (Defense Advanced Projects Agency) and ACS (American Cancer Society). Although they are limited to beginning Assistant Professors, they are highly competitive and require important preliminary results.

Types of Funding Agencies:

Foundations, Mission Oriented, and Basic Science

- DOD- Traditionally has been a strong supporter of materials research. Suffering from long term erosion of basic research budget (2-3% per year). But- **Young investigator awards!**
- NIH- Have instituted programs that favor younger scientists seeking their first grant. **Very conservative reviewers** who expect highly detailed proposals and preliminary results for most specific aims. **First timers get a additional priority!**
- DOE- The basic energy sciences wing has a long-term vision and is open to very basic research. There have been large increases in these programs over the last two years. Sustainable?
- NSF- Still probably one of the best places to get an individual PI grant. **Open to blue sky research** that is properly justified.
- PRF- PRF grants provide a reasonable amount of funding and are largely restricted to individuals who do not have other large sources of funding.
- Philanthropic Organizations- Largely limited to biological sciences directed and health care.

Examples of Foundations

- Research Corporation
 - Cotrell Scholars (<http://www.rescorp.org/cottrell-scholar-awards/>)
- Sloan Foundation (<http://www.sloan.org/fellowships>)
- Dreyfus Foundation
 - Teacher-Scholar Award (<http://www.dreyfus.org/awards>)
- Gates Foundation (<http://www.gatesfoundation.org/grantseeker/Pages/overview.aspx>)

Team Grants: Pros, Cons, Traps

- Successful collaborations are enriching and career enhancing.
- There should be something valuable (beyond funds) for both sides, for you and for the team agenda.
- Avoid service/outer-directed engagement.
- Participate when your core interests can be pursued naturally in the context of the team/ collaborative program, otherwise pass.

Other Resources

- Quality Education for Minorities Network-QEM
 - Grant writing workshop (<http://www.qem.org/>)
- Grant Writers, a for profit group that teaches grant writing.
 - Workbook (<http://www.grantcentral.com/>)
- Community of Science
 - Searchable database for grants (<http://www.cos.com/>)

Other Funding Opportunities

- NSF-BRIGE
- Carl Storm Minority Fellowship- Travel grant to attend a Gordon Research Conference. (<http://www.grc.org/diversity.aspx?page=2>)
- American Competitiveness in Chemistry-Fellowship (<http://www.nsf.gov/pubs/2010/nsf10535/nsf10535.htm>)
- Women Chemist Committee travel grants.

Intellectual Property

- Don't Let IP Concerns Cause You to Not Always Put on the Best Show.
 - It is Most Important to Build a Reputation and Impress Others with Your Science!
 - Few Patents Actually End Up Being Important
- There Are Some Basic Mechanisms to Protect Yourself
 - Don't Give Hard Copies of Slides and Try to Avoid Letting People Take Pictures of Your Posters
 - Leaving out Subtle Details in a Lecture can Constitute a Non-Enabling Disclosure
 - US Allows 1-Year After Public Disclosure to File. You can Protect Foreign Rights with a Provisional Filing