Building a strong research program

Sean P. Powers

Professor & Chair of Marine Sciences

Remember

- We have the greatest job in the world!
  - We get to transfer knowledge to the next generation of scholars and shape the future! (Teaching)
  - We generate new knowledge that may change the world (Research)
  - We get to shape policy and impact society in a positive way (Service).
  - We get to travel
  - We don't punch a clock

Balance – Being a Professor is tough

Balance

- Its too easy to become consumed with teaching and service activities. These have specific deadlines and times.
- Never give up on your research, never pass on an opportunity to start a new collaboration, never miss an opportunity to submit a paper or a grant.
- Progress in research requires more discipline than teaching or Service
  - Schedule time to write every week: grants and publications.
  - Keep to that time just as you would a scheduled class.
  - Schedule large blocks of time (2-3 per year) to do research.
  - Try to integrate your research into teaching and service activities.

Building a Research Program

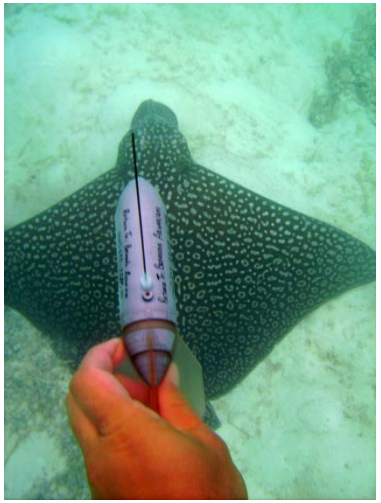
- Great information and tips out there on how to write a successful grant proposal
  - Tips vary by grant agency
  - Advice focuses on careful reading of the RFP, adequate time allotment, clear presentation and internal peer-review.
  - All extremely important.
- But there is little advice on how to bring it all together into a long-term strategy for a successful and rewarding career.

Building a Program (getting funding)

Tiger shark capture

- Start with modest proposals.
  - Reviewers and panelist are instructed not to look at budgets – but they do and it does influence their assessment (more apt to give modest budget request less scrutiny).
  - Young investigators are given some breaks at some agencies (NSF), but generally only for individual proposals.
  - Consider applying for RAPID or small grant programs.
- Young investigators should be wary of applying for large multi-institutional grants (they offer lots of work with minimal individual budgets).
- Try to develop a broad base of funding agency sources
  - Nationally competitive sources are critical but state and local sources can be important sources of funding.

Research



- Develop a tool that makes you unique or a sampling program that attracts other opportunities. Both are long term investments that will pay dividends.
- Have an adaptive research agenda – broaden your portfolio of species or processes as funding environment changes.
- Find a mentor and pursue collaboration with established investigators.
- Do not pass on opportunities early in your career (Panelist invitations, seminar invitations, working groups).
- Funding opportunities are rare, so never pass up on opportunities you think are "too mundane" – make them intersting.

Building a group

- Start with a lab tech/lab manager/competent grad or undergrad student. You will need someone to remove you from the day to day "chores" of your research.
- Young faculty members should wait to have post-doctoral support. Post-docs need generosity with authorship and ideas.
- Post-docs give the most bang for the research buck.
- As the lab grows ensure turnover among the group.

Cautions

- Do not become consumed with service activities. Your department and the University can wait till you get tenure to solve the major problems you see.
- Try to keep your frustrations with the University process in perspective. There is to much paperwork, spending funds is too complicated and there are too many hurdles!
- Recognize that UCUR, REU students, Graduate Students, are a tremendous time commitment and not Free or cheap labor. This commitment often falls under teaching more than research.

Remember

- Research funds insulate you from the University funding environment.
- Not all research requires extramural funding (stay active whether you have funding or not!)
- NEVER give up. You may have to change and adapt but never stop.