Part I: Overview of the Grants Process

Why grants? Investigator Perspective

- Make a difference!!
- Funding to do research
- Academic bean counting (more grants = greater success = more power over your own path)
- Build research team
- If very savvy can get portion of IDC's

Why grants? University perspective

- IDC's, IDC's, IDC's
  - Show me the money!
- Prestige
- Attract students
- Serve the community/state

What are IDC's?

So how do you begin?

- Determine a funding source
- NIH & Institutions
- USDA
- EPA
- CDC
- Foundations
- Community groups

Types of NIH grants (Alphabet Soup)

- "The R's"
  - R03, R21, R01
- "The T's"
  - T32, T34
- "The K's"
  - K01, K07, K08
- "The F's"
- "The P's"
- "The U's"

Once submitted- what happens?

- Review process
  - Standing study sections
  - Ad hoc study sections
  - What is it like to be a review panel member
  - Scoring
  - 2 levels of review
    - Scientific review
    - Programmatic/Council review
      - Set funding line
      - Politics?

Receiving the award

- How will I be notified?
- JIT info

Reporting

- Annual reports
- Final reports
- Manuscripts, manuscripts, manuscripts
- How manuscripts help the NIH

Tricks of the trade

- What to do in lean times?
  - Publish!!
  - Try, try again- perseverance is key
  - Variety is key both in types and funding sources

How can I increase my chance of success?

- Be a used car salesperson- sell, sell, sell.
- KISS!!!
- Clear, concise writing
- Have someone outside the area review- do they get it?
- FOLLOW DIRECTIONS!!!!!
- Don't make the reviewer mad by making their job harder for them!
- Resiliency

The game of luck

- Different score, different review section
- Sometimes the luck goes your way, sometimes it doesn't

Part II: Overview of the Grant Application

Major Parts of the Research Plan

- Introduction (if resubmission)
- Specific Aims- limit 1 page
- Research strategy (12 pages for R01; 6 pages for R03 or R21)
  a. Significance
  b. Innovation
  c. Approach
     a. Can include prelim studies here

"The Rest"

- Beware- takes more time than you think!!!
- "Boilerplate material" important
  - Most institutions will have standard content that you can use

Specific Aims

- Goal of research
- Summarize expected outcomes
- Impact
- List specific objectives

Research Strategy- Significance

"Does the project address an important problem or a critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?"

Research Strategy- Innovation

"Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed? "

Research Strategy-Approach

"Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?"

Preliminary Studies

- Incorporate at any point in the 3 sections
- Everyone has preliminary ‘studies’- think bigger than a funded research grant to do work

Outline Template (one example of many possible)

- Rationale (include prelim work)
- Overview (including biological rationale/model)
- Patient Population
- Intervention (including Conceptual Model(s))
- Recruitment & Retention
- Participant Procedures & Timeline
- Measures
- Statistical Analysis
- Power & Sample Size
- Project Timeline
- Strengths
- Pitfalls and Alternative Plans
- Project Team

New Investigator

- Very important to take advantage of
- "A new investigator is an individual who has not previously competed successfully for an NIH-supported research project other than the following small or early stage research awards:
  - Pathway to Independence Award-Research Phase (R00)
  - Small Grant (R03)
  - Academic Research Enhancement Award (R15)
  - Exploratory/Developmental Grant (R21)
  - Clinical Trial Planning Grant (R34)
  - Dissertation Award (R36)
  - Small Business Technology Transfer Grant-Phase I (R41)
  - Small Business Innovation Research Grant-Phase I (R43)
  - Shannon Award (R55)
  - NIH High Priority, Short-Term Project Award (R56)"
- Applications are reviewed differently- "more forgiving"

Common Mistakes (What I wish I had not done as a junior investigator…)

- Doing too much in too little time.
- Making the aims dependent upon each other
- Not selling your idea (understanding the review process helps tremendously); use impactful language; remember this is not a scientific manuscript!!!
- Using scientific jargon and lingo
- Not fully developing ‘the story’- remember you have to ‘teach’ the reviewer
- Not making sure that your idea passes the ‘so what?’ test.

Resources

- http://grants.nih.gov/grants/how-to-apply-application-guide.htm
- SF424 instructions
  - http://grants.nih.gov/grants/forms.htm
- Instructional website covering entire process (many video clips and helpful tips):
  - http://grants.nih.gov/grants/grants_process.htm

Additional questions…

- swann.adams@sc.edu
- (803) 777-7635