Writing an R01: A Hands-On, Brain Engaged Workshop

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Who decides if a grant is "excellent"?
(Translation: Who rates the scientific merit of a proposal?)

1. The Applicant
2. Study Section Review Administrator (SRA)
3. Reviewers
4. Program Officer
5. Council

The REAL Challenges of Writing an Excellent Grant

Two Challenges
1. To have truly excellent ideas
2. To communicate them clearly to a diverse group of reviewers
   - If the reviewers cannot see how truly excellent your ideas are, your grant will NOT get an excellent score.

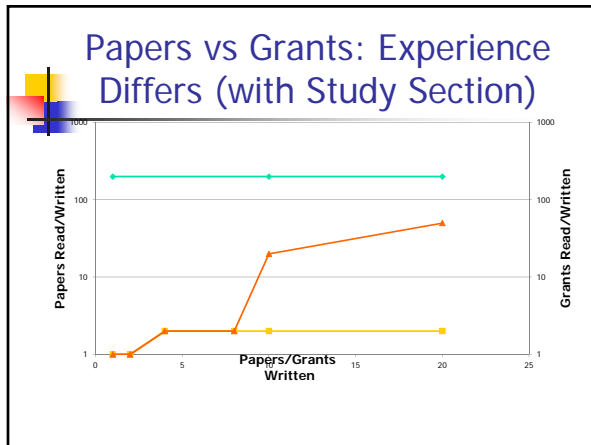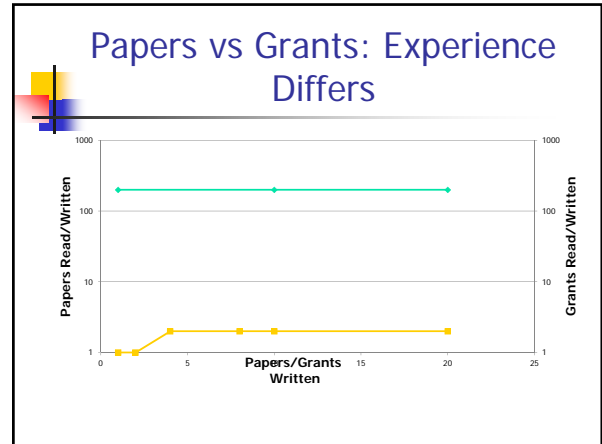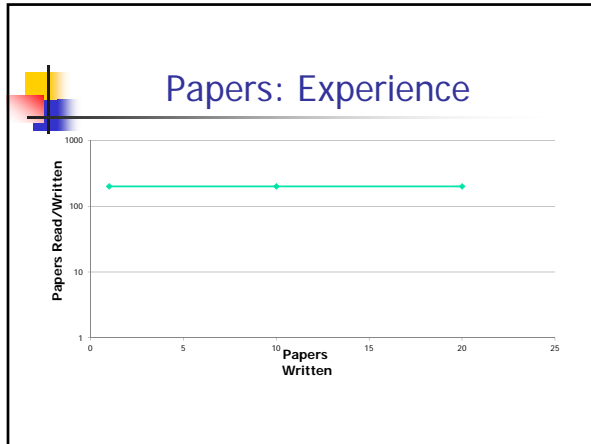---

The Importance of Presentation

- Excellent ideas can be invisible if presentation is not clear
  - Good Science + Bad Presentation → Probably not scored
- High quality presentation can enhance idea
  - Good Science + Good Presentation → Scored, but probably not competitive
- The best science requires a clear presentation to be understood
  - Excellent Science + Excellent Presentation → Great Score, probably funded (top 10%)

Elements of a research grant

- Hypothesis and Long-Term Objectives
- Specific Aims
- Background and Significance
- Progress / Preliminary Studies
- Research Design and Methods
- Literature Cited

What to write when?

1. Specific Aims
   - These need to be done first
     - They provide a road map for the research
     - Common fatal flaw – A grant with Aim 1 as the key; if it fails then the whole grant collapses → low priority.
   - Get feedback and revise before proceeding
2. Experimental Design
   - This is an extension/explanation of the Specific Aims
     - This section should be written to be parallel in structure to the Specific Aims
3. Rest of proposal
4. More parts, etc.
5. Abstract/Budget
   - Abstract is for lay people (reviewers read it only if rest of grant is not clear!)

Papers: Experience

Papers Read/Written — Papers Written

Papers vs Grants: Experience Differs

Papers Read/Written — Papers/Grants Written — Grants Read/Written

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Papers vs Grants: Experience Differs (with Study Section)

Papers Read/Written — Papers/Grants Written — Grants Read/Written

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The "Specific Aims" Section

- Should be ~1 page long and is THE MOST IMPORTANT PAGE IN THE APPLICATION
- This Section has two parts
  - A underline short, general statement about what your proposal will address, both long-term and short-term
  - A set of specific aims, each with a hypotheses that you will test and a brief explanation of how you will test them
  - Put the aims in a logical and sequential order.
- Repeat: This is the most important page in the application. If you do not stimulate the interest of the reviewer here, you are not likely to get a good score
  - Advice: Start with this section. Write it, get feedback, rewrite it – repeat. (10-15 times!)

The Specific Aims: Audience Participation

- Think about an experiment that you are doing or that you want to do
- Write down a few sentences about that experiment as if you were writing a Specific Aim for a grant
- 5 minutes ….

Brief Critique

- Pick a partner
- Swap papers
- Read your partners Aim
- 1 min …