I did my first NIH review in January, 1989

Giving and Responding to Critical Evaluations of Grants

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Some basics about the NIH

• $39.2 billion in 2019
• 80% of funds awarded to grants
• 50,000 grants funded
NIH Review

• 80,000 applications each year
• 25,000 different reviewers each year
• 2 levels of review
  1. Scientific review group (study section)
  2. Council
Study Section Versus Institute\Center

• Review - Study sections
• Funding - Institutes\Centers
Review versus funding (no F word allowed)

Study sections
- Surgery Anesth & Trauma
- Innate Immunity
- Immunology
- Cell Biology

Institutes
- General Med Sciences
- Heart Lung & Blood
- Allergy & Infectious Dis
- Biomed Engineering
Principles of NIH Review

- Expert Assessment – study section members
- Transparency – use the funding opportunity announcement
- Impartiality – conflicts of interest
- Fairness – 9 point scoring scale, written outcome
- Confidentiality – closed meetings
- Security – protect information
- Integrity – research misconduct
- Efficiency – TRIAGE STREAMLINE ERA commons
Reviewing

• Carefully read the grant
• Look up material if you do not understand the concept\molecule
• Be objective
• Do not critique minor issues
• Provide actionable items
  • The experimental design is weak *Lacks specificity*
    The experimental design does not discuss the potential influence of sex as a biological variable.
p<0.03

Implicit bias
Remick’s Rules Regarding Reasonable Reviewing

• Consider the prior critique
• Do not raise a new issue unless it is substantive
• At study section – be brief
• Your scores must match your critique
Unconscious bias

• Strive to understand and eradicate
NIH grant critique

• Grants are scored 1-9 (1 being best)
  • Significance
  • Investigator
  • Innovation
  • Approach
  • Environment
Impact Score

The grant is reviewed by at least 3 members of the study section
Everyone on the study section enters a single score
The scores are averaged and multiplied by 10

Analyses have shown that the single biggest influence on the impact score is the **approach**

* Acad Med 2016:91:1080
Appeal a critique

- You need to demonstrate
  - Evidence of bias by the reviewer
  - Conflict of interest
  - Lack of appropriate expertise within the study section
  - Factual errors that would have a substantial impact.

- You need to wait for the summary statement

- Statistically, appeals are less likely to be funded than revised grants
A specific example

Average of all scores = 3.27 x 10 = 33 right?

Actual score = 50

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<tr>
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<th>Reviewer Avg</th>
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<th>3</th>
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<td>2</td>
<td>1</td>
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</table>
How to respond to the critique part 1

• Use the scores as a guide to focus
• Remember that the approach score usually correlates with impact
• Read both weaknesses AND strengths
• Call your program officer (less important if triaged)
• Call your program officer
• Do not call the scientific reviewer officer (study section is done)
How to respond to the critique part 2

• You only have 1 page for the rebuttal – no need to thank reviewer
• Try to identify common themes in the critique
• Use the good scores & comments in your rebuttal
• Clearly identify the changes in the grant
• State specifically in the body of the grant what was changed
• Objectively respond to the issues
• Call your program officer
How to respond to the critique part 3

• In the body of the grant, identify the concerns and specifically address how the grant has been modified
• See all of Dr. Furie’s suggestions, especially
• Vent, vent, sleep, vent, prepare

• Early – look at what experiments may be required start them now
• Take out the calendar and plan
• Early – send the critique to your co-investigators for their input