

# **The experience of a NIH reviewer**

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# My experience

- Remote reviewing – **Internet Assisted Meeting**
- Panel: *Infectious diseases epidemiology, drug resistance & drug discovery*, NIAID
- R01 and R21 grants
- Specific topics assigned (malaria)
- Not done:
  - New Investigators / Early stage investigators
  - Foreign Institutions
- Yes done: Multiple PI/PD, Resubmissions
- Experience as a grantee (coordinator R01, subawardee)

# Preparedness & rigor

- *Scientific Review Officer* contacts you
- Periodically sends step by step high quality information on how it works
  - Confidentiality and Conflict of Interest
  - eraCommons website links IAM & documentation
  - Timelines
  - Guidelines
  - Tips for ensuring smooth procedures
  - Score descriptor
  - Critique template
  - Proposals, prior reviews if resubmission

## For Reviewers

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# Critique template

- **Overall impact**

Likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following five scored review criteria, and additional review criteria. An application does not need to be strong in all categories to be judged likely to have major scientific impact. Of the specific project, not the area of research.

Potential impact of the application and list of key score-driving issues. Avoid general comments and provide specific details. Provide sufficient context to orient comments

**Five review criteria to determine scientific and technical merit:**

- **Significance:** Strengths and weaknesses, score
- **Investigator(s):** Strengths and weaknesses, score
- **Innovation:** Strengths and weaknesses, score
- **Approach:** Strengths and weaknesses, score
- **Environment:** Strengths and weaknesses, score

Bullet points, keeping brief but with some context. Prioritize strengths and weaknesses by indicating if they are major (score-driving) or minor. Ensure bullets have evaluative statements that indicate assessment of a particular aspect of the application. Ensure the text within each section is consistent with the score.

**Overall Impact** – includes significance and feasibility (approach, environment, investigators etc.) – i.e., should it be done and can it be done? Do not confuse with Significance:

**Significance** – assumes success – i.e., should it be done? If successful, will the proposed project advance the field?

**Investigator:** Biosketches

- **Personal Statement:** If experience and qualifications make them particularly well-suited for their roles in the project
- **Established PI:** Publications and contributions to the field. Have they demonstrated ongoing record of accomplishments that have advanced their field(s)?
- **Early Stage Investigators or New Investigators,** do they have appropriate experience and training?
- If **Multiple PI applications:** Is the Leadership Plan adequate

**Innovation:** Research Strategy

- Does application challenge/seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions?
- Are **concepts, approaches or methodologies,** instrumentation, or interventions **novel to one field of research or novel in a broad sense?**
- Refinements, improvements, or new applications of theoretical, concepts, approaches or methodologies, instrumentation, or interventions proposed?

**Approach**

- Well-reasoned and appropriate overall strategy, methodology, and analyses to accomplish the goal
- Well described potential problems, alternative strategies, and benchmarks for success
- In the early stages of development, strategy to establish feasibility and risky aspects of management is evident
- Expect experimental/methodological details to be brief, while a general empirical approach is still required
- Preliminary Studies and/or progress report may be presented as separate sections or embedded within Approach

**Environment and facilities**

- Should be limited to those resources directly applicable to the proposed work
- Major items of equipment already available for the proposed studies should be listed under Equipment
- **For multiple sites,** resources at each site should be described. Special facilities that handle biohazards

## SCORING

Applications scored on five review criteria and Overall Impact using a scale of 1-9.

- Pre meeting all applications should be scored by assigned reviewers - overall impact score and criterion scores.

### SCORE DESCRIPTORS

Overall Impact or Criterion Strength	Score	Descriptor
High	1	Exceptional
	2	Outstanding
	3	Excellent
Medium	4	Very Good
	5	Good
	6	Satisfactory
Low	7	Fair
	8	Marginal
	9	Poor
<b>Other Descriptors for Final Outcome</b>		
<b>AB-abstention CF-Conflict of Interest DF-Deferred ND-Not Discussed</b> <b>NP-Not Present NF-Not Recommended for Further Consideration</b>		

should be supported by clearly articulated strengths

may have a balance of strengths and weaknesses

should be supported by clearly articulated weaknesses (or lack of strengths)

## Overall Impact:

The likelihood for a project to exert a sustained, powerful influence on research field(s) involved

Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

### Evaluating Overall Impact:

Consider the 5 criteria: significance, investigator, innovation, approach, environment (weighted based on reviewer's judgment)

e.g. Applications are addressing a problem of high importance/interest in the field. May have some or no technical weaknesses.

e.g. Applications may be addressing a problem of high importance in the field, but weaknesses in the criteria bring down the overall impact to medium.

e.g. Applications may be addressing a problem of moderate importance in the field, with some or no technical weaknesses

e.g. Applications may be addressing a problem of moderate/high importance in the field, but weaknesses in the criteria bring down the overall impact to low.

e.g. Applications may be addressing a problem of low or no importance in the field, with some or no technical weaknesses.

**5 is a good medium-impact application, and the entire scale (1-9) should always be considered.**



# ADDITIONAL REVIEW CRITERIA

Comment **without giving separate scores**:

- Protection for human subjects
- Data safety & monitoring plan (clinical trials)
- Inclusion of women, minority and children
  - Sex/gender
  - Race/ethnicity
  - Children (under 21)
- Vertebrate animals
- Biohazards
  - Acceptable
  - Unacceptable
- Resubmission/revision/renewal

# Administrative notes

Application Number	PI Last Name	Vertebrate Animal	Human subject	Gender	Minority	Children
1 R01 xxnnnnnnn	SMITH					
1 R01 xxnnnnnnn	JONES		OK	1A	5A	2A
1 R01 xxnnnnnnn	PEREZ					
1 R21 xxnnnnnnn	SINGH	OK				
1 R01xxnnnnnn	ZENGH	OK				
1 R21xxnnnnnnn	ROBERTS					
1 R01 xxnnnnnnn	PETERS					
1 R01 xxnnnnnn	LING	OK				
1 R01 xxxnnnnn	KUMAR					
1 R01 xxxnnnnn	JOHNSON	OK (euthanasia in am 3)?				

# Additional review considerations

Comment without giving separate scores and **not considering in overall priority score:**

- Applications from **foreign** institutions
  - Justified / Not justified
- Select reagents
  - Acceptable / Unacceptable
- Budget and period of support
  - Recommend as requested
  - Modifications recommended
  - Possible overlaps identified
- Additional comments (optional)

# Consensus

- The overall impact score will be used to generate the review order where the applications will be discussed from the best average score to the worst.
- What is posted by individual assessment in initial critiques is PRELIMINARY. If comments by other reviewers change the reviewers mind, reviewers should feel free to change the score (and final score). However, consensus among reviewers is NOT required (but it is sought as much as possible).
- Recalibration happens dynamically during the meeting
- For other applications not assigned to the reviewer, one should follow the discussion and vote:
  - a. Within the range given by the assigned reviewers
  - b. Outside the range given by the assigned reviewers (but then the reviewer need to make a statement as to why).

Lower Half	AVG	PRELIMINARY SCORES [Worst to Best]			
	3.7	4	4	3	
	3.5	4	4	3	3
	3.3	4	3	3	
	3.0	4	3	2	
	4.3	5	4	4	
	3.7	5	4	2	
	3.7	5	4	2	
	4.7	5	5	4	
	4.3	7	4	2	
	3.7	5	4	2	