Rigor & Transparency (R2T) – Tips from Study Section Reviewers

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May 25, 2016
NIH plans to Enhance Reproducibility

Released: October 9, 2015 (1st communication June 9, 2015)

Implementing Rigor and Transparency in NIH & AHRQ Research Grant Applications
Notice Number: NOT-OD-16-011

Implementing Rigor and Transparency in NIH & AHRQ Career Development Applications
Notice Number: NOT-OD-16-012

When
These updates took effect for due dates on or after January 25, 2016.
What is the goal of these changes?

Purpose

Applications (research and career development activity codes), progress reports and peer review expectations will incur changes intended to enhance the reproducibility of research findings through increased scientific rigor and transparency.

Updates Include:

- Revisions to application guide instructions for preparing your research strategy attachment
- Use of a new "Authentication of Key Biological and/or Chemical Resources" attachment
- Additional rigor and transparency questions reviewers will be asked to consider when reviewing (and SCORING!) applications
Enhancing Reproducibility through Rigor and Transparency

Forum Panelists

Mohammad Athar, PhD
Professor
Department of Dermatology

Yabing Chen, PhD
Professor
Pathology, Division of Molecular & Cellular Pathology

Rita Cowell, PhD
Associate Professor
Department of Psychiatry & Behavioral Neurobioloy

Jianhua Zhang, PhD
Associate Professor
Pathology, Division of Molecular & Cellular Pathology
Preparing your Research Strategy

Newly revised grant application instructions will:

• highlight the need for applicants to describe details that may have been previously overlooked;

• highlight the need for reviewers to consider such details in their reviews through revised review criteria.

These new instructions and revised review criteria will focus on four areas deemed important for enhancing rigor and transparency:

1. the scientific premise of the proposed research,

2. authentication of key biological and/or chemical resources,

3. consideration of relevant biological variables, and

4. rigorous experimental design for robust and unbiased results.
**Reviewing Rigor and Transparency of Research: Research Project Grant (RPG) Critiques**

<table>
<thead>
<tr>
<th>Apply to which applications?</th>
<th>Where will I find it in the application?</th>
<th>Where do I include it in my critique?</th>
<th>Addition to review criteria</th>
<th>Affect overall impact score?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Premise</td>
<td>All</td>
<td>Significance</td>
<td>Is there a strong scientific premise for the project?</td>
<td>Yes</td>
</tr>
<tr>
<td>Scientific Rigor</td>
<td>All</td>
<td>Approach</td>
<td>Are there strategies to ensure a robust and unbiased approach?</td>
<td>Yes</td>
</tr>
<tr>
<td>Consideration of Relevant Biological Variables, Such as Sex</td>
<td>Projects with vertebrate animals and/or human subjects</td>
<td>Approach</td>
<td>Are adequate plans to address relevant biological variables, such as sex, included for studies in vertebrate animals or human subjects?</td>
<td>Yes</td>
</tr>
<tr>
<td>Authentication of Key Biological and/or Chemical Resources</td>
<td>Project involving key biological and/or chemical resources</td>
<td>New Attachment</td>
<td>Comment on plans for identifying and ensuring validity of resources.</td>
<td>No</td>
</tr>
</tbody>
</table>
Sharpen your science … and R2T, too!

Rigor, Reproducibility & Transparency (R2T)

The Requirement

ALL NIH & AHRQ Grant applications AND progress reports MUST focus:
1. the scientific premise of the proposed research,
2. authentication of key biological and/or chemical resources,
3. consideration of relevant biological variables, and
4. rigorous experimental design for robust and unbiased results.

The Challenge

1. New Scored Criteria
2. New Required Appendix

The Opportunity

1. Expert BERD Consultations
2. Web Resources through CCTS Research Commons
3. CCTS Project Panels
4. Rigor in Training
5. Key Approaches in Version Control, Independent Verification and Data Archiving
Enhancing Reproducibility through Rigor and Transparency

NIH Expectations:
RIGOR and TRANSPARENCY

Grant Library
- Authentication of key biological and/or chemical resources

RESEARCH COMMONS ON THE WEB

Rigor & Transparency
- Guidelines, Tips and Helpful Resources
Guidelines, Critique Templates & Review Criteria

Note to Reviewers: These documents are provided as general reviewer orientation to NIH peer review. For meeting specific information, please rely on the documents and links provided by your SRO.

Guides for Reviewers, Critique Templates and Review Criteria Definitions are updated as of March 21, 2016.

Expand Menu | Collapse Menu

- R Awards (Research Project Grants; R01, R03, R21, SBIR/STTR, etc.)
- K Awards (Career Development)
- F Awards (Fellowships)
- T Awards (Training)
- C06, UC6 & G20 Awards (Construction & Modernization)
- Administrative Centers

http://grants.nih.gov/grants/policy/review_templates.htm
CCTS Forum

1st Wednesday of Every Month

WHEN: Wednesdays, 4:45pm – 6:00pm CT
WHERE: PCAMS building, 1924 7th Avenue South
Available by GoToMeeting.

See you in July!

The CCTS offers an array of resources to assist in your research efforts - from methodologic review, informatics consultation, and clinical research support to sample grants and training opportunities. Join us each month to learn more about topics important to you.

We welcome your advice on future topics.
Please send suggestions to CCTS Research Commons (ccts@uab.edu)