What Are the Updates?

Updates to Research Strategy Guidance

The research strategy is where you discuss the significance, innovation, and approach of your research plan. Let's look at an R01, for example:

- **State the strengths and weakness of published research or preliminary data crucial to the support of your application**
- **Describe how your experimental design and methods will achieve robust and unbiased results**
- **Explain how biological variables, such as sex, are factored into research design and provide justification if only one sex is used**

New Reviewer Guidelines

Here are the additional criteria the reviewers will be asked to use:

- **Is there a strong scientific premise** for the project?
- **Have the investigators presented adequate plans to address relevant biological variables**, such as sex, for studies in vertebrate animals or human subjects?
- **Have the investigators presented strategies to ensure a robust and unbiased approach**, as appropriate for the work proposed?

New Attachment for Authentication of Key Biological and/or Chemical Resources

From now on, you must briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies.

These include, but are not limited to:

- **Cell Lines**
- **Specialty Chemicals**
- **Antibodies**
- **Other Biologics**

Standard laboratory reagents that are not expected to vary do not need to be included in the plan. Examples are buffers and other common biologicals or chemicals.

Why Update the Guidelines?

The updates focus on four areas deemed important for enhancing rigor and transparency:

1. **Premise**
   - The scientific premise forming the basis of the proposed research

2. **Design**
   - Rigorous experimental design for robust and unbiased results

3. **Variables**
   - Consideration of relevant biological variables

4. **Authentication**
   - Authentication of key biological and/or chemical resources

Send inquiries to reproducibility@nih.gov