

The Art of Application

NIH is telling reviewers that the first assessment should be: "Is it worthwhile to carry out the proposed study?"

Shorter applications scored for overall impact -- now may just be the time for a new application strategy.

If the devil is in the details, that devil is now gone. In the new paradigm, impact trumps experimental details. But what should a shorter application look like?

While we can't say for sure what peer reviewers will expect of the new applications, we can tell you what NIH will expect of reviewers.

These reviewer instructions from the NIH Center for Scientific Review hold important clues for applicants:

Your ultimate task is to judge the likelihood that the proposed research will have an impact on advancing our understanding of the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability. Thus, the first assessment should be "Is it worthwhile to carry out the proposed study?"

This new approach does not bypass conventional wisdom that investigators need the skills to carry out the research. They still do.

But with the primary emphasis on impact, even the right skill set and elegant science may not fare well in review unless the reviewers think the research tackles a high-impact problem.

Begin at the Beginning

With the new paradigm shift -- impact over details -- your biggest challenge may be up front: finding the right area to study.

In case you need inspiration, we offer this Haiku.

grant writing wisdom

impact, impact, and impact

essence of success

Impact combines the significance of the topic and the feasibility of your approach.

To be considered high-impact, your next application should show how your research can move its field of science forward.

Impact, Significance, Feasibility

Reviewers assess the likelihood of a project to have a powerful impact on its area of science -- the basis of the overall impact score.

Impact combines the significance of the topic and the feasibility of your approach -- the likelihood that the work will achieve its goals. Impact does not reflect the number of people affected by a disease.

To find a topic that's high-impact to your proposed research area, first consider the significance of the research to the field. Ask: can the topic pass the "so what?" test. If reviewers do not believe the question is important, it won't matter that your approach is feasible.

Still, you don't want to stray too far from your expertise. No matter how significant the question, a flawed approach is unlikely to produce results, hurting the overall impact/priority score.

Think Strategically

Here's a strategy we suggest to help you find your niche:

- * Choose research that lends itself to a problem you have expertise to pursue.

- o New investigators should not stray far from their area of expertise.

- o More seasoned investigators can go farther afield.

- * Ask yourself how people who are likely to be your reviewers might view the potential impact of your idea -- try to get out of your skin and into theirs.

- o Find the CSR review committees that could review an application in your area of science; go to the CSR Study Section Roster Index.

- o Identify three to five people who would probably serve as your primary and other assigned reviewers.

- + Ask yourself whether they would likely view your project as having a high impact on its field.

- + Be aware that you are not allowed to request reviewers in your cover letter.

- o When you submit your application, include a cover letter requesting a study section that seems like a good match.

- * Talk to experts in your institution, other colleagues, and NIAID program officers to get their perspective on the impact of your proposed research.

- * Give a presentation on a proposed topic and possible approaches to get feedback.

- * Rate the impact of each problem you are considering on a scale from 1 to 9, the NIH review scale.

- * If it scores poorly, go back and rethink the idea.

We recognize that trying to get into the heads of reviewers is truly hard and there's no guarantee this approach will succeed.

But to not try is a mistake. Your application must appeal to your reviewers, and impact -- together with feasibility -- is now the primary basis of that appeal.

When you write the application, connect the dots. Don't assume reviewers will make the connection between the importance of the problem and how it will move the field forward. The more diverse the review group, the more you'll need to explain the significance of your research.

In some ways, NIH has made applying easier. The new application structure is aligned with the review criteria, so you no longer have to guess where to address them.

And, if you follow the approach outlined above you will have already figured out the importance of the science before you start writing the application.

What's Ahead

We know that people are confused about the difference between significance and overall impact and whether impact is judged mostly using the significance criterion. NIH is preparing guidance on this subject, and we will have more to say about it in a later issue.

We are now revising our Web pages with new information and strategies for the shorter applications. Meanwhile, be careful when reading

any pages that have a yellow caution box at the top since the text may be misleading.

During the next year, we plan to refine our Web-based information and advice as we learn more about how the enhanced peer review changes are working in practice. We invite you to give us feedback and suggestions for this effort by emailing deaweb@niaid.nih.gov.

Learn more about the new applications at NIH's Enhancing Peer Review at NIH, including Details of Application Changes and Table of Page Limits. For more on scoring, see Scoring System and Procedure.

Our previous articles on this topic include "Are You Ready for the New Forms?," "Get a Handle on the New Application Forms," and "Prime Yourself for New Applications, Peer Review."