

February 2021

Dear Hearing Health Foundation grant reviewer,

Thank you for serving on the Hearing Health Foundation grant review committee. I want to highlight some points about the overall impact score that you should consider as you complete your reviews.

Scoring guidelines:

I have attached a scoring guide, which I have modified from the document that NIH review panels use. Please note that the **overall impact score** is intended to evaluate the likelihood that a project will have an influence on science and/or clinical practice and/or technological development. Impact can be thought of as comprising two factors: the relative importance of the problem (high, medium, and low) and the presence or absence of technical weaknesses. Thus a good medium-impact application with no technical weaknesses should be scored as a 5, which is the middle of the 1-9 scoring range.

Reviewers tend to be more comfortable assessing technical problems and less comfortable assessing the importance of the problem. As a result, applications with few weaknesses are often scored in the 1-2 range without due consideration of their importance to the field. A glut of applications in the 1-3 range reduces the effective scores of truly exceptional applications, and reduces our opportunities to recommend (or even discuss) more meritorious applications.

Please try to spread your scores, and to use the entire range of 1-9. You may feel that your assigned applications are all in the top third. But bear in mind that the probability of this happening is small. A useful strategy for spreading scores is to consciously think about “importance to the field” and “technical errors” separately. Try to classify each application as in the top third (1, 2, or 3), middle third (4, 5, or 6), or bottom third (7, 8, or 9) of “importance to the field.” If you truly believe that a given application is in the top third of importance to the field, and that technical errors are negligible, then a score in the range 1-3 is appropriate. If the given application is not in the top third of importance to the field, or if there are significant technical problems, then a score for 4-9 is appropriate.

Evaluation Criteria:

The scoring system is designed to give clear and constructive feedback to applicants and to help us to rank the grants so that HHF can fund the best proposals. The critique format was created so that applicants get a clear message about our impressions of the strengths and weaknesses of their applications. Here are a few things to consider when providing your review comments:

**Significance** assumes success. Given that all of the proposed aims are successful, will the project improve knowledge, technical capability, or clinical practice in a major (1, 2, or 3), moderate (4, 5 or 6) or minor (7, 8, or 9) way?

**Note:** Significance does not refer to the significance of a problem or disease, but rather the potential of the work to advance the field. For example, hearing loss is a significant field of study but not all projects that address hearing loss have the potential to advance the field in a major way.

**Investigators** refers to the training, technical expertise, scientific creativity and productivity of the applicant(s). Look for evidence of publication quality over quantity, to highlight the creativity, novelty, and impact of an investigator’s work or research program. Also *assess the trajectory of the investigators career and whether they are ideally suited to conduct the proposed work.*

**Innovation** can come in many forms. It can be found in methodologies but can also come from a creative application of (or combination of) existing techniques, or an insightful interpretation of results. A novel approach that has little chance of working does not always yield innovation. Conversely, innovation can be high even when existing techniques are applied, if exciting theories are tested or independent ideas are integrated into a comprehensive framework.

**Approach** evaluates the proposed experimental procedures and methods. Because of the short application format, there is no room for minute details about what will be done (e.g., down to the number of trials for each condition). Therefore, applications cannot be differentiated based on potential flaws at this level of methodological detail. *Reviewers are asked to determine whether the overall experimental approach and strategy is a good way to address the Aims of an application.* If you are concerned that an investigator lacks the experience or skills to conduct the proposed experiments, you should reflect this in your score under the Investigator category. The score for approach should reflect a high-level evaluation of the appropriateness of the proposed methods.

**Note:** Sometimes, reviewers use weaknesses in the approach section to justify a poor overall score that actually reflects low or moderate significance. Such reviews give the applicant the misleading message by suggesting that the weakness is methodological, when the real problem is a lack of significance. It is in the interest of the applicant to **be direct and honest about where the flaws lie, even though this is sometimes difficult.**

**Environment** evaluates whether the laboratory equipment, space, support staff, facilities and intellectual environment foster and support the proposed work.

**Overall Impact** is intended to evaluate the likelihood that a project will have an influence on science and/or clinical practice and/or technological development. The overall impact score should take into account the five scored categories listed above, but *it is not the arithmetic mean of the criteria scores* nor is it computed by some other fixed formula. **The Overall score should also reflect the degree to which the research directly addresses the primary funding area (e.g., CAPD, tinnitus, hyperacusis, or stria).**

How much the overall impact is influenced by any particular scoring category depends very much on the particular grant. For example, an application may have high significance, high innovation, good approach, good environment but it is doubtful that the investigator can accomplish the work (which decreases the likelihood of impact) **or the proposal doesn't bear directly on one of the core funding areas.** Or, an application with only modest innovation may have high overall impact if the significance is very high, the investigator strong, and the approach solid.

Reviewers should write a paragraph summarizing the factors that resulted in their Overall Impact Score.

a) Additional considerations when scoring

1. Always keep in mind the likely **impact** of the proposed work. Publication records speak to an investigator's ability to complete research projects of high significance (which tend to be more thorough and innovative than average projects). Publication records can also provide credence that proposed techniques are within the capabilities of the investigative team and can help predict the likely impact of the work
2. For new investigators, it is appropriate to make some allowance for overly ambitious research designs, some lack of preliminary data, and a modest publication record. However, if a new investigator proposes a technique that is new for their lab, they should provide some indication that they have the knowledge, expertise, and/or resources to carry it out.