

Request for Information (RFI): Future Direction of the NLM G13 Grants for Scholarly Works in Biomedicine and Health Program

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1. Program Vision and Priority Areas

The Grants for Scholarly Works in Biomedicine and Health program should prioritize systematic reviews that critically evaluate whether experiments on animals have verifiably translated to advances in human health.

It is widely recognized that findings from experiments on animals often do not translate to humans. NIH has reported that approximately 95% of novel drugs fail during human clinical trials (<https://ncats.nih.gov/research/research-activities/ntu>). Despite this lack of translation, NIH continues to fund and conduct experiments on animals, even in areas where the failure is most well documented.

This disconnect highlights the need for rigorous, evidence-based assessments of whether experiments on animals are providing meaningful clinical benefit in specific areas of biomedical research. By critically evaluating and synthesizing findings across multiple studies, systematic reviews can assess the scientific validity, human relevance, and translational value of animal experimentation for human diseases. These evaluations can help identify areas where animal experimentation has not advanced human health and inform evidence-based funding decisions to maximize the impact of limited research dollars and reduce the continued waste of animals' lives and taxpayer resources.

The infrastructure needed to support this work is already well established. Resources are available to facilitate systematic reviews, including software for every stage of the systematic review process, tools for assessing study quality and risk of bias, standardized reporting guidelines, training workshops/ tutorials, and opportunities to commission reviews from experts in evidence synthesis (<https://www.cochrane.org/products-and-services>). By supporting these evaluations, NLM can help build a stronger evidence base for research funding decisions and support NIH's prioritization of human-based research methods.

2. Scope and Audience of Scholarly Works

Results from systematic reviews and other meta-analyses evaluating the translational relevance of animal models in human disease research should primarily serve researchers, clinicians, and policymakers. These reviews can provide critical evidence to inform NIH policies, research priorities, and funding decisions. Incorporating systematic reviews into assessments of NIH's research portfolio can help identify gaps, prevent unnecessary duplication, and ensure limited resources support only the most robust, high-quality, and applicable research. This approach is already well established in clinical research, where systematic reviews are routinely used to address uncertainties about the effects of treatments. By guiding investment away from approaches with low human relevance, these evaluations can improve the translation of basic and preclinical research findings into clinical insights and advance the development of effective treatments, ultimately improving human health.

4. Program Structure and Review Considerations

For the program broadly, expertise in non-animal methods (NAMs) is important for the peer review of program applications involving any assessment of these approaches. Reviewers who primarily conduct experiments on animals may be more familiar with these methods and, as a result, may be more likely to favor proposals focused on synthesizing, contextualizing, and disseminating knowledge generated from animal studies over those focused on human-based methods (<https://doi.org/10.1016/j.namjnl.2024.100004>). This bias, known as animal methods bias, occurs when a preference for animal-based methods or a lack of sufficient expertise prevents the fair evaluation of non-animal approaches (<https://www.animalmethodsbias.org/>).

A recent pilot analysis of NIH-funded projects in basic, translational, and preclinical neuroscience explored the impact of animal methods bias in NIH funding decisions. The analysis found that study sections with predominantly animal-based research expertise awarded fewer grants to projects using non-animal methods (<https://doi.org/10.1101/2025.02.28.640877>). Although preliminary, these findings suggest that the methodological expertise represented within a study section may influence funding decisions in ways that disadvantage non-animal approaches. This is inconsistent with NIH's mission to advance human health and its stated goal of prioritizing human-based science.

To ensure fair and rigorous evaluation of proposals, NLM should consider methodological expertise when selecting reviewers. Including reviewers with expertise in human-based approaches will help ensure that high-quality scholarly works synthesizing evidence from non-animal methods are appropriately evaluated, supported, and disseminated.