

QUEST criteria – attributes of robust and innovative research

The criteria described here relate to quality and ethics as well as to open science and the translation of biomedical research at BIH. The goal is to map the robustness, reproducibility, and confirmability of research projects using the steps outlined below, and hence to best stimulate the innovation potential of biomedical research at BIH.

1. Priority setting

Use a table or screenshots to show how you have systematically reviewed already existing evidence and literature regarding your research question. Describe your search strategy (search terms used, logical operands, search date, and search results) and how you took such results into account when devising your research question.

If your research question is based on unpublished data (e.g., data collected as part of a validation study), explain how you used the available data to devise the research question.

2. Strategies for establishing scientific rigor

Outline the strategies for establishing scientific rigor that apply to the execution and analysis of your specific research project. Concentrating on the main points, provide a detailed overview of the **strategies for reducing the risk of bias** that you will use for your specific project.

Also provide information about the following issues as they relate to your concrete project:

- Sex and gender-specific considerations
- Use of standardized protocols and guidelines

Please answer questions pertaining to study design, setting, and statistical analysis in your project application.

3. Transparency and dissemination of results

Describe the strategies you will use to achieve transparency in your research project and to disseminate your results. Be sure to cover the following aspects:

- Pre-registration of the study
- Availability of the study protocol
- Availability of raw data, analysis protocols, code (open data)
- Open-access publications, open source
- Publication of the full results including null and unexpected results
- Use of reporting guidelines

4. Participation

Describe how and in which stages of your research relevant stakeholders (e.g., study participants, patient organizations, funders, researchers) will be involved and contribute to your project.

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