Feedback from Review Panels in the September 2021 Call

Research Council for Biosciences, Health and the Environment



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1. Overview

In the 2021 September Call, the Research Council of Biosciences, Health and the Environment of the Academy of Finland received 985 applications. The applications devided between four funding opportunities, **Academy Projects, Academy Research Fellows, Post-Doctoral Researchers and Clini-cal Researchers**, and were reviewed by 234 experts in 24 different panels. The Research Council of Biosciences, Health and the Environment organised 18 of these expert panels in January – March of 2022. After each panel meeting, all the panels discussed the overall quality of the applications and the evaluation process to provide feedback for the applicants preparing for the 2022 September Call. This is a summary of the panels' comments and suggestions.

The panel meetings were once again organized online to mitigate the risks related to the COVID-19 pandemic. Some of the panel members would have preferred meeting face-to-face, but all the panels agreed that the online meetings worked well, and the quality of evaluations was not compromised by the digital environment. All the panels thought that the thematic range of applications reviewed in the panels was broad and matched very well with the panels' expertise.

2. Scientific quality

The panels were impressed by the quality of applications submitted to the 2021 September Call and considered the overall standard very high, in some panels even outstanding, compared to high international standards. Most of the applications were very well-written and detailed enough to allow proper evaluation of all the aspects of the proposal. The panels also acknowledged the very good diversity of research topics and appreciated the number of applications putting forward fundamental science.

The quality of early-career researcher's applications was generally very high but varied more between the panels than the quality of applications of established researchers. Some panels reported large numbers of outstanding applications while few were concerned of the scarcity of excellent applications by early-career researchers within their field of expertise. The panels felt that many of the shortcomings in the early-career researcher's applications could have been avoided if the proposal was revised by their supervisors prior to submission and wondered if this was a sign of a lack of sufficient support from the mentors and host institutions.

The panels also request the applicants of all funding opportunities to revisit the call text, including the funding criteria and policies of the Research Council of Biosciences, Health and the Environment and the application guidelines to be aware of the criteria determining an excellent application. For example, the best applications were driven by clearly described research questions and hypotheses that were backed up by convincing preliminary data. The implementation of research was carefully planned and described in enough detail, including rigorous statistical analysis plans, sample size calculations and appropriate risk mitigation measures.

The excellent quality of population datasets and extensive health record data were considered a special asset of Finnish research, and this reflected the quality of applications utilising these resources. However, the panels noted that not all of these applications were actually generating new data, but focusing on secondary analysis of existing cohorts. The panels therefore perceived them less strong regarding novelty and innovation compared to other types of applications.

In translational projects, the panels were hoping to see applications better involving patients and end-users and/or applying citizen science approach already in the writing phase of the proposal. This would improve the impact of the projects.

The panels viewed inter- and multidisciplinary proposals positively and emphasized the importance of consortium applications when the scope and research questions required multidisciplinary expertise.

3. Competence, collaboration and mobility

The Academy of Finland complies with the principles of <u>responsible re-</u> <u>searcher evaluation</u>. Panels supported this more holistic view of considering the applicants' full achievements and competences but were surprised to see the potentially misleading citation metrics and impact factors mentioned in several applications. Instead, the panels would prefer the applicants to comment on their key achievements and describe the scientific content and their personal contribution to the work. The latter would be especially important in publications where the name of the applicant appears in the middle of a lengthy list of authors.

Generally, panels considered the applicants' level of competence high among all funding instruments. However, the panels pointed out that the assessment of independence of the younger researchers was sometimes difficult. The panels emphasise the importance of projects clearly initiated and driven by early-career researchers instead of those emanating from the supervisor's projects, since the previous will better support the career development of the future top scientists. To clarify the contribution and independence of the younger researchers, the panels encourage the applicants to state how the funding would promote their path to independence, to clearly indicate corresponding authorships, previous grants received as the principal investigator, and to describe their contribution in managing and driving the projects listed in the CV to demonstrate leadership experience.

The panels appreciated the high quality of research teams and collaboration networks of the applicants. The best applications included support letters

from the collaborators stating their commitment to the project and the plan for task allocation, data sharing and management. However, in some cases the quality of the collaborators and the team members were difficult to assess. The panels recommend the applicants to describe the role and skills of the collaborators and their allocated tasks in the project in sufficient detail. In addition, applicants should also describe the research environment where the work will be carried out.

Most applications included good mobility plans that expanded the applicant's collaboration networks and improved the scientific quality of the proposals. The panels considered mobility very important, but also recognized its problematic aspects as a putative burden to young families. The panels pointed out that mobility as such should be considered broadly as a means of creating international collaboration and learning opportunities rather than as mere physical relocation. Other cultures and research environments can be experienced and learned in many ways, and among the applications of September 2021 call there were already very good examples of successful online collaboration. The main emphasis should be in finding the best way to collaborate and promote one's research.

4. Other feedback

The panels had some suggestions to further streamline the evaluation work by improving the structure and clarity of the applications. Panels that evaluated very interdisciplinary applications wanted to remind the applicants to avoid unnecessary, disciplinary jargon. In addition, the panels wish that the applicants would avoid deviating from the format of applications since a more uniform presentation makes it easier for the panels to find the relevant information.

Many applicants had already included a link to their scientific profile, ORCID number, or similar in their CVs. The panels thought this was useful and in compliance with Academy of Finland's DORA signature, and should therefore be promoted. The panels also appreciated that the applicants had resisted attaching too many additional documents to the applications.

The panels recommend including a Gantt chart or similar to the applications to clearly present the timelines and milestones of the proposed project. In addition, the panels hoped for realistic mitigation plans and plans for allocating human resources, including % time contributions. This would help in assessing feasibility.

Finally, the panels pointed out that the responsible science considerations were often left to bare minimum and hoped that the applicants paid more attention to the <u>instructions</u> regarding this section. For example, one panel thought that data accessibility should be better considered and described in studies involving human participants and combining phenotypic measurements or data from multiple 'omics technologies.