1 Role of experts and the Academy of Finland

The Academy of Finland funds cutting-edge and innovative research aiming at significant scientific breakthroughs. Our funding is based on open competition, independent peer review and responsible science. We grant funding to researchers and research teams as well as to the most promising early-career researchers through different funding instruments.

Experts are invited to review the scientific excellence of the submitted funding applications. In most cases, the applications are reviewed and ranked in expert panels. However, external reviewers may be used to support the panel review or as independent reviewers.
Both individual experts and panel members are esteemed, mostly international researchers in the field of the reviewed applications.

After receiving the panel review reports, decision-making bodies (research councils or subcommittees) make the final funding decisions. The decisions are based on a peer review of scientific quality and the panel ranking, but factors related to science policy may also influence the decisions. Examples of such factors are the promotion of equal opportunities for all genders, the advancement of early-career researchers’ careers and impact beyond academia.

2 Secrecy and integrity in the review process

According to the Finnish Act on the Openness of Government Activities, research plans, abstracts, progress reports and review reports are secret documents. Application documents should therefore be handled and stored with due care and confidentiality.

The Academy of Finland is committed to following the guidelines of the Finnish Advisory Board on Research Integrity for responsible conduct of research. The guidelines also apply to reviewing funding applications, research programmes and scientific disciplines.

All reviews must be handled confidentially, competently and impartially, based on the criteria set for the review process. Care must be taken to ensure that the review complies with general stipulations about conflicts of interest. Prior notice must be given if a reviewer has economic or other affiliations or significantly different schools of thought in relation to the applicant under review. This is a way to avoid conflicts of interest.

As a reviewer, you are not allowed to disclose any information concerning application documents or reviews to outsiders, nor are you allowed to use this secret information to your own benefit or anyone else’s benefit or disadvantage. You may not reveal to outsiders that you are assessing the research plan of a particular researcher. If you are contacted by anyone, including the applicant, who has questions about the application or reviews, please advise them to contact the Academy of Finland. Disclosing the contents of research plans to third parties or
contacting applicants personally without explicit agreement to do so are regarded as instances of inappropriate behaviour on the part of reviewers. Once the review has been completed, you are required to destroy all application documents and any copies made of them.

Reviewers are guilty of research misconduct if they misappropriate research ideas, results, observations or data from applications. This also includes copying any part of an application. The quality of the review is not a research-ethical issue unless the review has been conducted carelessly, which may give an appearance of a review that deliberately either underrates or overrates the applicants under review.

After the funding decisions have been made, the Academy will publish a list of panels and (with permission) the names of the panel members including their current positions and institutions as well as the names of all individual reviewers enlisted in the call. If requested, this information will be disclosed already after the panel meeting.

The applicants will see the names of all panel members in the panel review report. If requested, the draft reviews and the names of reviewers who have supplied the draft reviews will also be disclosed to the applicant (under the Finnish Act on the Openness of Government Activities).

Confidentiality must also be maintained after the review process has been completed. Reviews are secret documents, but applicants will have access to the panel review reports on their applications after the funding decisions have been made. An applicant shall not disclose to third parties secret information obtained on the basis of party status and concerning other persons than the party themself. The draft reviews and external draft reviews are also secret documents unless otherwise stated in the applicable legislation or required by court order.

3 Conflicts of interest

As a reviewer you are required to declare any personal interests according to the criteria below. You must disqualify yourself if you can in any way benefit from the approval or rejection of the application. You must also disqualify yourself in the following circumstances:
• You have collaborated with the applicant (e.g. you have co-authored and published an article or manuscript with the applicant in the past three years, been involved in the preparation of the application, or are involved in the publication or application of the results).
• You have been a superior, subordinate or instructor of the applicant in the past three years.
• You are applying for the same post as the applicant.
• You are applying for funding from the Academy from the same funding instrument.
• The applicant is a close person to you. A close person is:
  a) your spouse (also de facto), child, grandchild, sibling, parent, grandparent or a person otherwise close to you (e.g. fiancé/e or a close friend), as well as their spouses (also de facto)
  b) a sibling of your parent or his/her spouse (also de facto), a child of your sibling, or your previous spouse (also de facto)
  c) a child, grandchild, sibling, parent or grandparent of your spouse as well as their spouses (also de facto), or a child of a sibling of your spouse
  d) or a half-relative comparable to the above-mentioned persons.

You are also disqualified if your impartiality may be endangered in any other way, or if you feel that you have a conflict of interest and are therefore disqualified to review the application.

If you identify any conflicts of interest, please notify us as soon as possible.

4 Reviewer’s declaration

Please acknowledge that by accepting the task of a reviewer you guarantee not to disclose the information you receive and not to use it for anybody’s benefit or disadvantage as stated in section 2 above (Secrecy and integrity in the review process). Further, you affirm that you will immediately notify the Academy if you have a conflict of interest in one or more applications.
5 Review and ranking

5.1 Review criteria and rating scale

The main criteria in the review are:

- project’s relevance to the call
- quality of research
- feasibility of the research plan and the quality of research environment
- human resources, expertise and collaborations including researcher mobility, and researcher training
- responsible science.

Please note that the review forms for different funding instruments contain slightly different review criteria. The objectives of the different funding instruments and the instrument-specific review criteria are presented in the review forms. At all levels of the review process, please pay close attention to the potential for breakthrough research.

**Written reviews:** Evaluative comments are particularly valuable to the decision-making bodies. After the funding decisions have been made, the applicants can access the panel review report on their own applications. The review also provides the applicant with important feedback. Reviewers should therefore:

- write evaluative rather than descriptive comments (avoid copying text directly from the application)
- write comments under each sub-item
- write a clear summary assessment of the main strengths and weaknesses of the project
- write coherent comments in the passive voice, which can be used, if agreed, as such in the panel review report.

**Numerical evaluation:** The consistency between the numerical rating and the written comments is particularly important. In the draft review (before the panel meeting) the numerical
evaluation is made with a rating scale ranging from 6 (outstanding) to 1 (insufficient). In the final reviews (in the panel meeting) the scale ranges from 6 (outstanding) to 3–1 (fair to insufficient).

<table>
<thead>
<tr>
<th>Draft rating</th>
<th>Description</th>
<th>Final rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 (outstanding)</td>
<td>Demonstrates extremely high novelty and/or innovation; has potential to substantially advance science at global level; presents a high-gain plan that may include risks</td>
<td>6 (outstanding)</td>
</tr>
<tr>
<td>5 (excellent)</td>
<td>Is very good in international comparison – contains no significant elements to be improved</td>
<td>5 (excellent)</td>
</tr>
<tr>
<td>4 (good)*</td>
<td>Is in general sound but contains some elements that should be improved</td>
<td>4 (good)</td>
</tr>
<tr>
<td>3 (fair)*</td>
<td>Is in general sound but contains important elements that should be improved</td>
<td>1–3</td>
</tr>
<tr>
<td>2 (poor)*</td>
<td>Contains flaws; is in need of substantial modification or improvement</td>
<td>(fair to insufficient)</td>
</tr>
<tr>
<td>1 (insufficient)*</td>
<td>Contains severe flaws that are intrinsic to the proposed project or the application</td>
<td></td>
</tr>
</tbody>
</table>

* Below threshold for panel discussion if draft rating is below 5.

5.2 Responsible researcher evaluation

When reviewing the competence of the applicant, please pay attention to that the Academy of Finland is a signatory of DORA (link takes you to DORA's website), the San Francisco Declaration on Research Assessment, and CoARA, the Agreement on reforming research assessment, which make recommendations for improving research assessment practices. The Academy is also committed to following Finland’s national recommendation on Good practice in researcher evaluation. The Academy adheres to the recommendations in its peer-review processes. Applicants are not allowed to include any journal-based metrics in their application nor any other citation metrics.
You are asked to consider the content and quality of publications, rather than their number or venue of publication, or the impact of the journals in which they were published. We advise you not to use journal-based metrics (e.g. Journal Impact Factors) as a surrogate measure of the quality of individual research articles to assess an individual scientist’s contributions. Please note also that other citation metrics used in isolation do not describe the impact, importance or quality of the publication(s) and can potentially be misleading when applied to the peer review. Citation metrics are dependent on the citation practices of different research fields and are therefore not a reliable comparative measure in multidisciplinary panel review.

When assessing researchers’ merits and their competence in delivering the proposed research, you are asked to consider the value and impact of all research outputs, not only publications. Applicants are asked to list the ten most relevant publications and ten other key outputs, and to provide appropriate rationalisations in their applications. The complete publication list is provided as well. The types of outputs vary between disciplines.

You are also asked to be sensitive to legitimate delays in publication and personal factors or other types of leave, part-time work and disabilities that may have affected the applicant’s record of outputs. Read more about responsible researcher evaluation on our website.

5.3 Before the review panel meeting

Before the meeting takes place, each application is assigned to at least two panel members who then prepare draft reviews and give draft ratings to the applications. A third panel member (read-only/reader) is assigned to read the application to be able to form a general view of it. All draft review reports will be made available to all panel members at least one week before the meeting. Therefore, the deadline for the drafts is essential. In some cases, an external draft review may be requested from an expert outside the panel to provide additional knowledge pertaining to a particular field. The draft overall ratings on the application determine if it will be discussed thoroughly in the panel meeting: if the draft ratings are below 5 (excellent), as a rule, the application will not be discussed. Panel members are entitled to request a discussion on any application assigned to the panel.
5.4 Review panel meeting (online)

The panel members have access to all applications assigned to the panel, barring conflicts of interest (see section 3). At the meeting, the panel will thoroughly discuss the applications where any reviewer has given 5 (excellent) or 6 (outstanding) as the overall draft rating. The panel prepares one consensus panel review report on each application based on the discussions and/or the draft reviews and decides the final rating. Reports on the applications that receive an overall final rating below 5 (excellent) will include only the summary assessment of the project’s strengths and weaknesses and the final rating. Therefore, we strongly encourage you to pay special attention when reasoning the main strengths and weaknesses of the proposals already when preparing draft reviews.

After the panel has completed the review of the applications during the panel meeting, it will also be asked to rank the best applications. The applications are ranked based on the review criteria used and the programme-specific objectives – no additional criteria are used.

6 How to review applications in the Academy’s online services

Please use the Academy of Finland’s online services (link takes you to the online services via the Academy’s website) to review applications. Both draft reviews and panel review reports are completed in the online services. You can access the items of the research plan directly from the corresponding review form questions. However, we do expect you to read the full application. You can find the review instructions and offline versions of all our review forms under Guides for reviewers on our website.

7 Responsible science and societal effects and impact

7.1 Research ethics

The Academy of Finland requires that the Finnish Advisory Board on Research Integrity guidelines Responsible conduct of research and procedures for handling allegations of misconduct in Finland (link takes you to the Board’s website) are followed in all Academy-
funded research. We also require that researchers follow ALLEA’s (All European Academies) European Code of Conduct for Research Integrity (link takes you to ALLEA’s website) when engaging in international collaboration.

The Academy will not process a funding application if the applicant has been found guilty of research misconduct in the three years preceding the year of the call. If we find out about the misconduct during the funding period, whatever is left of the funding period will be added to the three-year limit. If the applicant appeals the decision on the misconduct, and the appeal is successful, we will process the applicant’s new applications following normal procedures. Read more about the ethical questions on our website.

7.2 Equality and nondiscrimination

The Academy of Finland’s research funding promotes equality and nondiscrimination as part of responsible science. To secure responsible reviews and decision-making, the Academy is, in accordance with its Equality and nondiscrimination plan, committed to defining the means to support combining work and family life and the research careers of women in all funding opportunities. Therefore, career breaks due to certain leaves (maternity, paternity, parental or childcare leave, or military or nonmilitary service, other special reasons, such as long-term illness) cannot be evaluated negatively in the evaluation process.

The Academy requires that all Academy-funded research promotes gender equality and nondiscrimination. Academy reviews and decision-making emphasise the importance of promoting equality and nondiscrimination either in the suggested project or in the wider society. Gender is not part of the information in the applications under review.

In the review of applications, the Academy asks reviewers to pay attention to the unconscious bias that affects us all. Unconscious bias refers to a positive bias towards our “ingroup” and a negative bias towards our “outgroup”. For example, when you are assessing whether the research is groundbreaking and whether the applicant is competent enough to carry out the
proposed project, pay special attention to the possible unconscious biases that you might have and that could have an impact on your evaluation. The very act of realising hidden biases makes them less powerful.

In review (especially in panels), it is easier to detect unconscious biases in others than in yourself. We ask you to be prepared to call out bias when you see it.

### 7.3 Open science

The Academy of Finland is committed to promoting the principles and practices of open science to improve the quality, responsibility and social impact of science. The goal is to make all outputs produced and used in research (research publications, data, methods and metadata) widely available for reuse. The principles of open science must be pursued with due attention to good scientific practice and law. The degrees of data openness may justifiably vary, ranging from fully open to strictly confidential. Read more about the Academy of Finland’s open science policy on our website.

The Academy is a member of cOAlition S and uses Plan S principles and practices in its funding guidelines. In addition, the Academy applies the National Policy for Open Access to Scholarly Publications. When reviewing publication plans, reviewers are asked to take note of the Academy’s open access policy and value the applicants’ efforts to publish in OA journals or use other alternatives that secure the immediate open access of articles. All peer-reviewed articles written in Academy-funded projects should be published with immediate open access. Researchers may use OA journals, platforms, repositories or journals that commit to full OA by 2024.

When reviewing applicants’ preliminary presentations on data management and open access to research data, reviewers are asked to take note of the Academy’s research data policy and value the applicants’ efforts to open the research data collected during the research. Reviewers are also asked to support well justified arguments if the applicant states that no research data will
be collected or gives understandable reasons for not opening the research data. The funded projects submit a full research data management plan after a positive funding decision.

**7.4 Sustainable development**

One of the science policy objectives that are factored in when Academy funding decisions are made is how the proposed project has considered sustainable development. Although it is not a review criterion as such, we encourage reviewers to comment especially if any shortcomings are identified in the matter.

In the context of sustainable development goals, responsible science concerns a description of how the project can promote one or several of the eight goals for sustainable development: equal prospects for wellbeing, a participatory society for citizens, sustainable employment, sustainable society and local communities, a carbon-neutral society, a resource-wise economy, lifestyles respectful of the carrying capacity of nature and decision-making respectful of nature.

In their research plans, researchers are encouraged to describe how the project promotes sustainable development as part of responsible science.

**7.5 Societal effects and impact**

Societal effects and impact of research refer to the ways in which research influences a wide variety of phenomena and trends in society. The effects and impact emerge as a result of the combined effect of research findings and other factors and generally manifest over the long term.

Applicants are encouraged to consider how their work relates to wider issues, extending beyond academia, when they apply for research funding. Reviewers are asked to give their view on the matter in their review reports.