

SOP:	RS 101.6	Scientific Merit Peer Review
Version Date:	10-2024	
Review By:	10-2027	
Subject:	To outline the procedure for conducting scientific merit peer review of Animal Use Protocols (AUPs); specifically, when the review process was not already completed through an external funding competition.	
Related Documents	Scientific Merit Reviewer Form; Submission for Scientific Merit Review; AREB SOP 100 – Submission of Applications for AREB Review; and RS 102 – Submission for Scientific Merit Review Form; CCAC FAQs - Scientific Merit and Ethical Review of Animal-based Research	

Background

The Canadian Council on Animal Care (CCAC) requires that all animal-based research projects receive scientific peer review from two independent experts prior to their approval by the Animal Research Ethics Board. Animal use for research, teaching, and/or testing is only acceptable if it shall "...contribute to [the] understanding of fundamental biological principles, or to the development of knowledge that can reasonably be expected to benefit humans or animals;" Independent scientific merit peer review is necessary for careful examination, and to "attest to the potential value of studies with animals" (CCAC Policy Statement: Ethics of Animal Investigation, 1989).

When an Animal Use Protocol (AUP) is submitted to the Office of Research Services ('Research Services'), if scientific merit peer review has been completed in accordance with CCAC guidelines and through an external funding competition, the AUP will be submitted to the AREB for ethical review. The Principal Investigator (PI) may be asked to submit supporting documents including, but not limited to, funding approval letters to Research Services, if these documents have not already been received by Research Services.

Scientific Merit Peer Review Process for internally funded or non-funded research

In cases where the scientific merit peer process was not conducted through an external funding competition, the following steps will be organized by Research Services to obtain independent scientific merit peer review:

1. The researcher completes the Submission for Scientific Merit Review form and sends the completed form, along with a PDF of their AUP, to Research Services.
2. Research Services solicits two (2) independent reviewers (internal or external to MacEwan) and requests their confidential assessment of the protocol within five (5) business days using the Scientific Merit Reviewer Form provided.

- a. If Research Services has not heard from a peer reviewer within this time, another reviewer will be selected.
 - i. Research Services may maintain a pool of reviewers, both internal and external, with expertise in fields of study that harmonize with the research activities of MacEwan University.
 - ii. Alternatively, Research Services may consult with the PI to obtain the names of possible reviewers, with relevant expertise, who do not pose a conflict of interest and who do not currently sit on the AREB.
 - iii. To avoid conflicts of interest, external reviews are encouraged.
3. Once the scientific peer review process is complete and if merit is approved, Research Services provides an approval letter to the PI or research team, and the AUP may be submitted to the AREB for ethical review.
 - a. If the review process finds that merit is not acceptable, revisions to the AUP may be required prior to ethical review.
 - b. Research Services may send the results of the peer review to the PI or research team, except for items that may identify the reviewers.
 - c. Research Services may submit the accompanying information verifying that peer review for scientific merit has been completed, along with reviewer comments relating to animal-based methods, to the AREB.

Roles and Responsibilities of the Independent Peer Reviewer

1. The Reviewers will be provided with the Submission for Scientific Merit Review Form, and the AUP.
2. The Reviewers will use the Scientific Merit Reviewer Form to assess “the objectives, hypotheses, methods and contributions of the project” ([CCAC guidelines on animal use protocol review](#)).
 - a. Reviews for sound scientific merit comment on the objectives and potential contribution(s) of the study to scientific knowledge, the appropriateness of experimental design to address the study’s hypotheses and the use of animal-based methods.
 - b. Reviewers must be “knowledgeable scientists who do not collaborate with the investigator” and done in absence of conflict of interest.
3. The Reviewers will provide Research Services with the completed Scientific Merit Reviewer Form, which will contain their feedback on the merit of the project, and their recommendation for moving the project forward.

4. Scientific Merit Reviewer Recommendations

After review of the scientific merit for the proposed study, the reviewers may recommend one of the following options to the Research Services:

- ☐ **Excellent**; approve “as is”
- ☐ **Good**; minor revisions suggested as per the recommendations above
- ☐ **Fair**; major revisions required as per the recommendations above
- ☐ **Poor**; should not be pursued

5. If concerns are raised by reviewers, the principal investigator should be given the opportunity by the research administration to address these concerns. If following this step, one reviewer concludes that there is scientific merit while the other does not, Research Services will decide how best to manage the conflicting reviews on a case-by-case basis.

6. Scientific merit peer reviews are valid for up to six (6) years. A protocol must be submitted for a new review at the end of this period, or proof provided that external scientific merit review has been performed. Extensions will not be granted.

Pilot Projects

When a researcher with an existing AUP which is approved for scientific merit and they conduct a pilot project with the intent to develop or evaluate a new method for their existing peer-reviewed research program, this is deemed to fit within the scope of their existing merit approval.

If the pilot project has the goal of initiating a new research program and is outside of the scope of the existing program, then scientific merit requires peer-review.

Conflicts of Interest

Based on the criteria used by the federal granting agencies, scientists should not review a proposal when they:

- are from the same immediate department, institution, organization, or company as the applicant, and interact closely with the applicant in the course of their duties at the institution;
- have collaborated, published or been a co-applicant with the applicant, within the last five years;
- have been a student or supervisor of the applicant within the last ten years;
- are a close friend or relative of the applicant;
- have had long-standing scientific or personal differences with the applicant;
- can gain or lose financially from the outcome of the application; and
- for some other reason feel that they cannot provide an objective review of the application.

Previous Versions

SOP Number	Date Effective	Summary of Changes
RS 101.0	06-2010	
RS 101.1	04-2012	
RS 101.2	07-2012	
RS 101.3	11-2016	Clarification of the external review process.
RS 101.4	11-2019	Updates in line with the CCAC new FAQ
RS 101.5	10-2021	Minor revisions for clarity
RS 101.6	10-2024	Addition of pilot information