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## **BACKGROUND**

The institution is responsible to have in place a mechanism to ensure that proposed animal use for research is independently peer-reviewed for its scientific merit before it is given final approval by the University Animal Care Committee (UACC) Animal Research Ethics Board (AREB) [*Canadian Council on Animal Care (CCAC) policy statement on: Scientific merit and ethical review of animal-based research*;  
[https://www.ccac.ca/Documents/Standards/Policies/Scientific\\_merit\\_and\\_ethical\\_review\\_of\\_animal-based\\_research.pdf](https://www.ccac.ca/Documents/Standards/Policies/Scientific_merit_and_ethical_review_of_animal-based_research.pdf).]

## **PROCEDURES**

All proposed animal-based research work must be peer reviewed for scientific merit, at arm's length from the UACC and the UACC AREB. Scientific merit review can be conducted in parallel with AREB ethical review. However, the AREB will not approve new or 4-year renewal of animal use protocols (AUPs) until the AREB receives confirmation that scientific merit has been demonstrated through an independent peer review.

These procedures will be effective as of January 1, 2018.

Where funding sources for research projects have competitive peer review processes with appropriate independence and expertise to assess scientific merit (e.g. federal granting agencies such as CIHR, NSERC, NCI, Heart and Stroke, and others), the institution and the AREB will typically choose to accept these as providing evidence of scientific merit.

In cases where a project is funded from smaller foundations (local, national or international) or an industrial source where peer-review for scientific merit has been conducted, the principal investigator (PI) must provide information regarding the composition of the scientific panel and a brief description of the review process upon request including documentation regarding the dates of review. In the case of reviews completed within a private company, there should be at least two scientific experts on the peer review panel. For projects that are either internally funded (e.g., internal departmental/ faculty/institute funds) or when the source of funding does not have a peer review mechanism with appropriate independence and expertise, the peer review process outlined in these procedures will be used.

The University of Saskatchewan (USask) Office of the Vice-President Research (OVPR) Scientific Merit Review Committee for Animal-Based Research (SMRCABR) will be responsible for ensuring that all proposed animal-based work has received peer review for scientific merit prior to approval of the protocol by the AREB. At the request of the PI, a non-disclosure or confidentiality agreement can be arranged with the peer reviewers. The SMRCABR will be composed of 7-9 scientific members of USask faculty whose research involves the use of

animals. One member will be the Chair of the committee. Ideally, the scientific merit peer review process should be initiated prior to submission of the AUP to the AREB. The AREB will review AUPs in parallel with the scientific merit review process, but will not approve AUPs until scientific merit has been demonstrated through an independent peer review.

Along with the AUP, the PI must provide a short research proposal (maximum 3 single spaced pages) for the work identified in the AUP that clearly highlights sufficient information to allow the reviewers to provide an assessment on the following:

- a) The objectives and potential contribution(s) of the study to scientific knowledge;
- b) Originality or novelty of the study;
- c) The hypothesis or purpose of the study;
- d) The research design and methodology;
- e) The animal-based methods and justification of animal use, including sample size (and power analysis as appropriate); and
- f) The overall scientific merit of the project.

The PI may provide the following:

1. The names of three potential reviewers who are experts in their field and who can provide an unbiased assessment for scientific merit.
2. The names of any potential reviewers to whom the project information should not be sent, due to a conflict of interest.

Conflict of interest guidelines for selection of reviewers exclude individuals who:

- a) Have collaborated, published or been a co-applicant on a research or training grant with the applicant within the last five years,
- b) Been a student or supervisor of the applicant within the last eight years,
- c) Are a close personal friend or relative of the applicant, or
- d) Have a long-standing scientific or personal difference with the applicant, are deemed to be in a conflict of interest and should not be part of the review process.

Coordinated by the SMRCABR Chair, three committee members (one of which could be the Chair) will be assigned to review the proposal for scientific merit. Each reviewer submits a completed assessment form to the Chair within two weeks of assignment. The Chair reviews the assessment forms, and if two or more reviewers indicate scientific merit, the Chair communicates this outcome to the Research Ethics Specialist. All reviews are maintained electronically within the OVPR Animal Care and Research Support (ACRS) Office for archiving.

The Research Ethics Specialist confirms to the AREB that scientific merit is established. If two or more reviewers identify issues with the proposal, the reviewers may discuss the issues by e-mail or telephone, if necessary. Adjustments can be made to the review or if the decision of each reviewer stands, the Chair returns the assessment forms electronically to the Research Ethics Specialist, who then makes the anonymous reviews available to the Principal Investigator. The Principal Investigator may respond to the reviewer concerns and these responses are communicated back to the reviewers via the Research Ethics Specialist and SMRCABR Chair. The Principal Investigator should include a revised proposal as appropriate for

review by the SMRCABR assigned reviewers. This exchange of information will continue until the peer reviewers are able to make a decision regarding the scientific merit of the project.

The Chair may seek outside peer review support if the proposal is considerably outside the expertise of all SMRCABR members. The Chair will identify two researchers (which may include individuals suggested by the principal investigator) external to the University and who do not have a conflict-of-interest with the Principal Investigator to review the proposal for scientific merit. The same procedure of review that the SMRCABR employs is followed in this instance.

If the SMRCABR reviews are in agreement that the proposed project is meritorious, it will be deemed as such by the AREB. If two or more peer reviews indicate that the scientific merit and experimental design are not acceptable, then the AUP cannot be approved by the AREB, until the PI addresses all outstanding concerns. Only once the peer reviews have identified that scientific merit is established, may an AUP be approved by the AREB.

The AUP will be exempt from the requirement for scientific merit review by the SMRCABR, if the animal use falls under the following categories:

1. AUP or four year renewal AUP is associated with a funding agency that employs an acceptable scientific merit review process.
2. Four year renewal AUP previously reviewed by the SMRCABR where the duration of the project was clearly identified in the original AUP. In these cases, scientific merit remains valid for the entire funding period.
3. The animal use is only for educational purposes (these are subject to pedagogical merit review).

**The AREB has the option to request additional peer review on any submitted AUP, regardless of the agency funding and the status of peer review.** This option is only used if there is a serious concern by the majority of the AREB members regarding the particulars of the animal model or experimental design not related directly to the merit of the general scientific content. In such instances, the Chair of SMRCABR would request additional peer review on the AUP in question.

Appendix A provides supplementary information on the types of funding agencies and examples of types of projects, to assist in making judgements on the need for additional independent scientific peer review for merit.

Appendix B provides a specific list of funding agencies that are known to conduct scientific peer review for merit. AUPs funded by any agencies from this Appendix should not normally need to undergo peer review coordinated by the Chair SMRCABR.

In cases where additional trials are added to a project that was previously peer reviewed, or if a modification is submitted which alters the study, the AREB has the option to request additional peer review for scientific merit on those new studies.

*Approved by the UACC, 25 November 2021*

## **Appendix A: Supplementary Information to UACC Procedures for Assessing Scientific Merit of Projects Relating to Animal Use Protocols**

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### **Category 1 – Scientific Review for Merit Conducted by Funding Agency therefore Additional Review Not Required**

Research Animal Use Applications funded by:

- a) Major National Granting Agencies – Taxpayer supported
- b) Major Charitable Granting Agencies – National and Other
- c) Federal Government Granting Agencies
- d) Provincial Government Funding Support Agencies

Guideline:

1. All research AUP applications funded in whole, or in part, by a granting agency in this category will not require additional external scientific review for merit.

### **Category 2 – Assessment Required for External (Additional) Scientific Review for Merit**

Research Animal Use Applications funded by:

- a) Internal or Local Granting Agencies
- b) Commercial and Private Companies
- c) Livestock and Other Producer Interest Groups
- d) Miscellaneous Granting Agencies
- e) 'Unfunded'
- f) All applications with a Category of Invasiveness of "D" or "E" that are not already associated with funding from a major granting agency (Category 1, above).

Guidelines:

1. Any research AUP applications funded by an agency in this category (grant or contract) will require assessment whether additional external scientific review for merit is required.
2. The assessment of whether additional external scientific review for merit will be required will be based on whether the funding body conducts scientific review for merit (e.g., the WCVM research funds). If the funding body conducts review for merit, then additional external scientific review for merit is not required.
3. Where funding sources in this group are collaborative with, or associated with AUPs also funded by a funding agency/agencies in Category 1 (above), an additional external scientific review for merit is not required.

## Appendix B: List of Peer Review Funding Agencies

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### PEER REVIEWED FUNDING AGENCIES

#### INDEX

##### A

Alberta Agricultural Research Institute  
Alberta Cancer Board (ACB)  
Alberta Children's Hospital Foundation  
Alberta Heritage Foundation for Medical Research  
Alberta Ingenuity Fund  
Alberta Innovation & Science - Science Awareness and Promotion (formerly ASRA)  
Alberta Lung Association  
Alex's Lemonade Stand Foundation  
Alzheimer Society of Canada  
Alzheimer's Association  
American Brain Tumor Association  
Arthritis Society  
Asthma Society of Canada  
Autism Speaks

##### B

Banting Research Foundation  
Bayer Blood Partnership Fund  
Boehringer Ingelheim (Canada) Ltd.  
Brain Tumor Society  
British Heart Foundation  
Burroughs Wellcome Fund Awards

##### C

C17 Research Network  
Calgary Health Region  
Canada Foundation for Innovation  
Canada Research Chairs Secretariat - CRC Program  
Canadian Arthritis Network  
Canadian Association of Gastroenterology  
Canadian Breast Cancer Research Initiative Grants  
Canadian Blood Services  
Canadian Breast Cancer Foundation - Alberta Chapter  
Canadian Breast Cancer Research Initiative  
Canadian Cancer Society  
Canadian Celiac Association  
Canadian Cystic Fibrosis Foundation  
Canadian Diabetes Association  
Canadian Federation of University Women  
Canadian Foundation for AIDS Research (CANFAR)

Canadian Foundation for the Study of Infant Deaths  
Canadian Foundation on Fetal Alcohol Research  
Canadian Health Services Research Foundation (CFI)  
Canadian Hemophilia Society  
Canadian Institutes of Health Research (CIHR)  
Canadian Liver Foundation  
Canadian Lung Association  
Canadian National Institute for the Blind  
Canadian Prostate Cancer Research Fund  
Canadian Psychiatric Research Foundation  
Canadian Swine Health Board (CSHB)  
Canadian Stroke Network  
Cancer Research Society  
Christopher Reeve Paralysis Foundation  
Crohn's and Colitis Foundation of Canada  
Cystic Fibrosis Foundation

## **D**

Dairy Farmers of Canada

## **E**

EJLB Foundation (grants to enhance young scientific careers in Schizophrenia)  
Epilepsy Canada

## **F**

Fight for Sight - Prevent Blindness America  
Food and Drug Administration (USA)  
Foundation for the Children's Oncology Group

## **G**

Genome Canada  
Government of Saskatchewan – Ministry of Agriculture: Agriculture Development Fund (ADF)

## **H**

Health Research Fund (Administered through AHFMR)  
Heart and Stroke Foundation of Canada  
Hospital for Sick Children Foundation  
Howard Hughes Medical Institute  
Hotchkiss Brain Institute (HBI)  
Human Frontier Science Program  
Huntington Society of Canada

## **I**

International Rett Syndrome Foundation

**J**

Juvenile Diabetes Foundation International

**K**

Kidney Foundation of Canada

Killam Programs

**L**

Leukemia and Lymphoma Society

Leukemia Research Foundation

Leukemia Research Fund of Canada

London Life Award

**M**

March of Dimes Birth Defects Foundation

Margaret Gunn Endowment for Animal Health Research

Medical Research Council of Canada (MRC) (see Canadian Institutes of Health Research)

Molly Towel Perinatal Foundation

MSI Foundation

Multiple Sclerosis Scientific Research Foundation

Multiple Sclerosis Society of Canada

Muscular Dystrophy Association

**N**

National Alliance for Research on Schizophrenia and Depression

National Brain Tumor Foundation

National Cancer Institute of Canada

National Institutes of Health

National Tay-Sachs & Allied Diseases Association Inc

Natural Science Engineering Research Council (NSERC)

**O**

Ontario Institute for Cancer Research

Ontario Mental Health Foundation

Ontario Neurotrauma Foundation

Ontario Pork

Ovarian Cancer Canada

**P**

Parker B. Francis Fellowships in Pulmonary Medicine

Parkinson Foundation of Canada

Pediatric Brain Tumor Foundation of the United States

Physicians' Services Incorporated Foundation

PrioNet Canada

Prostate Cancer Research Foundation of Canada

**R**

Rx & D (formerly PMAC)

**S**

Saskatchewan Health Research Foundation (SHRF)  
Savoy Foundation  
Scottish Rite Charitable Foundation (Alzheimer's Disease)  
Scleroderma Foundation  
Spina Bifida and Hydrocephalus Association of Canada  
Social Sciences Health Research Council (SSHRC)  
Sylvia Fedoruk Canadian Centre for Nuclear Innovation

**T**

The Arthritis Society  
The Children's Heart Foundation  
The Foundation Fighting Blindness  
The Terry Fox Foundation  
Thrasher Research Fund  
Tourette Syndrome Association Inc.

**U**

United Mitochondrial Disease Foundation  
United States Department of Education  
University of Calgary (URGC)

**W**

Whitaker Foundation  
Western College of Veterinary Medicine –Animal Welfare Fund  
Western College of Veterinary Medicine – Companion Animal Health Fund  
Western College of Veterinary Medicine – Townsend Equine Health Research Fund  
Western College of Veterinary Medicine – Mark and Pat DuMont Equine Orthopedics Research Fund  
Western College of Veterinary Medicine – Wildlife Health Research Fund  
Western Economic Diversification Canada (WD)  
Winn Feline Foundation

**Y**

Young Innovator Awards