Canada

Canadian Institutes
of Health Research
Instituts de recherche
en santé du Canada

The CIHR Peer Review Process

Policies and Responsibilities
of Grants Committee Members

CIHR IRSC

Canadian Institutes of
Health Research
Instituts de recherche
en santé du Canada

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1   Purpose of the Manual

The purpose of this manual is to provide information on CIHR's objectives, governance and policies; to outline the roles and responsibilities of peer review committee members evaluating grant applications; and to define the policies and procedures for peer review of grant applications. CIHR depends upon peer review for the evaluation of research grant applications, to ensure that leading-edge research is supported and that CIHR maintains a strategic national and international health research presence.

This manual is addressed primarily to committee members, but is also of use to applicants in explaining the peer review process for grant applications from submission to final judgment. For information regarding the assessment of salary award applications, please see the Policies and Responsibilities of Awards Committee Members (http://www.cihr-irsc.gc.ca/e/23467.html). For detailed regulations concerning all aspects of CIHR funding programs, please see the Grants and Awards Guide (http://www.cihr-irsc.gc.ca/e/805.html).

2   Peer Review at CIHR

The mandate of the Canadian Institutes of Health Research (CIHR) is as follows:

"To excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened health care system."

The purpose of peer review is to ensure excellence in the research funded by CIHR. The peer review system also ensures accountability, not only to the Government of Canada and the Canadian taxpayer – the source of CIHR funding – but to the research community at large. Peer review is carried out by committees of experts (peer review committees) that encompass all four pillars of health research (Biomedical, Clinical, Health Systems and Services, and Population and Public Health).

CIHR funds research through both open and strategic competitions. Open competitions accept proposals in any area of health research. Strategic competitions are sponsored by one or more of CIHR's Institutes or Branches and applications are solicited in specified areas of health research. In general, the same policies and procedures are followed for both types of competitions, unless otherwise specified in the funding opportunity. A list of current and archived CIHR funding opportunities can be found on the CIHR Funding Opportunities Database (http://www.cihr-irsc.gc.ca/e/780.html).

Peer review is overseen by CIHR's Research and Knowledge Translation Committee (RKTC), which governs all aspects of research-related decision making. RKTC develops, implements and reports on CIHR's research and knowledge translation strategies, in accordance with the CIHR Act (http://www.cihr-irsc.gc.ca/e/22948.html)

and the overarching strategic directions set out by the Governing Council. The approval of funding for all research and knowledge translation initiatives is in an integral part of RKTC's responsibilities. Funding recommendations from peer review committees are first considered by the RKTC Subcommittee on Programs and Peer Review (SPPR), which are then forwarded to the RKTC for final decision.

3   Principles of Peer Review

3.1   Confidentiality

Integrity of the peer review process depends on well established principles of confidentiality. All information contained in applications, reviewer reports, Scientific Officer notes and committee discussions is <u>strictly confidential</u>. The applications and any discussions thereof may not be used for any purpose beyond that for which they were originally intended. Committee members must not discuss with applicants or reviewers any information relating to the review of a specific application outside of the committee meeting. Applicants must not contact committee members regarding the status of their applications. All requests for information on an application or a reviewer report should be referred to CIHR Program Delivery staff responsible for the committee in question. For CIHR's policies on Confidentiality, Conflict of Interest and Privacy, please see http://www.cihr-irsc.gc.ca/e/28654.html.

By law, applicants have access to their own application files. Therefore, all written material used in evaluating an application is made available to the applicants when they are notified of CIHR's decision. The identity of the reviewers will not be revealed to the applicants under any circumstances. However, a list of peer review committee members will be published on the CIHR website 60 days after the RKTC approves funding for a competition cycle and will be included in the annual CIHR Power of Volunteers booklet.

All materials related to the review process must be stored in a secure manner to prevent unauthorized access. They must be transmitted using secure carriers and technologies. When they are no longer required, all material related to peer review must be destroyed using a secure method or returned to CIHR for destruction.

3.2   Conflict of Interest

CIHR must make every effort to ensure not only that its decisions are fair and objective, but also that they are seen to be so. As a result:

1. Anyone who has an application as a Principal Applicant before the committee is excluded from participating in that committee.

2. No committee member with a conflict of interest may participate in any part of the review of an application. A committee member is considered to have a conflict of interest with an application if he/she:

- is from the same immediate department, institution, organization or company as the applicant, and who interacts with the applicant in the course of his/her duties at the department, institution, organization or company;
- has collaborated, been a co-applicant or published with the applicant, within the last five years (exception will be made for CIHR funded networks designed to increase partnerships among disciplines, institutions and thematic research);
- has been a student or supervisor of the applicant within the last ten years;
- is a close personal friend or relative of the applicant;
- has had long-standing scientific or personal differences with the applicant;
- is in a position to gain or lose financially from the outcome of the application (e.g., holds stock in the company of an industry partner or a competitor); or
- for some other reason feels that he/she cannot provide an objective review of the application.

All committee members (Chair, Scientific Officer, reviewers, etc.) are subject to the same conflict of interest guidelines. CIHR staff and the Chair are responsible for resolving areas of uncertainty during the committee meeting.

All committee members reviewers must read and agree to abide by to the Confidentiality and Conflict of Interest Policy prior to viewing any application information. This task is performed electronically (on ResearchNet) or by using a form provided by CIHR.

3.3 Fairness

Success of the peer review system is critically dependent upon the willingness and ability of all committee members to be fair and reasonable; to exercise rigorous scientific judgment; and to understand, and take into account in a balanced way, the particular context of each application. Reviews are provided to the applicant without prior editing by CIHR staff, and CIHR does not take responsibility for their content. An applicant will not accept that your review is fair if it contains comments that could be construed as sarcastic, flippant, arrogant, or inappropriate in any way. Conversely, a constructive review, which includes helping the applicant by pointing out deficiencies that could be repaired in a resubmission, will help to convince a disappointed applicant that you provided a fair assessment of the proposal.

4 Policies Impacting Peer Review

4.1 International Collaborations

As stated in the CIHR Act, one of the ways CIHR fulfills its mandate is by "pursuing opportunities and providing support for the participation of Canadian scientists in international collaborations and partnerships in health research." As a result, CIHR accepts applications for research to be carried out in, or in collaboration with applicants based in, other countries. The international nature of the research should not be a factor in the scientific assessment of the proposal, beyond how it relates to the feasibility of the proposed research and the quality of the research question. Reviewers should also

not be influenced by the funding obtained or requested for the international components when recommending a budget for the Canadian component(s). For detailed information on applying for funding with an international partnership component, please see the subsection titled "Global Health Research" in the Grants and Awards Guide (http://www.cihr-irsc.gc.ca/e/22630.html).

4.2   Knowledge Translation

Knowledge translation is integral to CIHR's mandate and falls into two main categories, *end of grant KT* and *integrated KT*. With both categories of knowledge translation CIHR expects researchers to disseminate their findings and facilitate their translation into improved health, more effective products or services, and/or a strengthened healthcare system. Note that the costs of dissemination are eligible expenditures in all CIHR grants.

For end of grant KT, many means of dissemination exist and the onus is on the researcher to select the most appropriate vehicle for the intended knowledge-user audience to ensure maximum impact. When the primary knowledge users are researchers, dissemination of results through the publication of articles in high quality and accessible journals is appropriate, although other strategies that increase awareness of the results and facilitate their application may also be appropriate. When knowledge-user audiences outside the research community should be informed of specific research findings, dissemination plans with more ambitious goals and comprehensive strategies are expected. With integrated KT, stakeholders or potential research knowledge users are engaged in the entire research process and the research is directed at producing solutions to issues or problems the stakeholders/knowledge users have identified. Further information is available at http://www.cihr-irsc.gc.ca/e/29418.html.

4.3   Access to Research Outputs

Applicants and peer reviewers are reminded that the CIHR *Policy on Access to Research Outputs* (http://www.cihr-irsc.gc.ca/e/32005.html) applies to all new and renewed grants awarded after January 1, 2008. Grant recipients must now ensure that all published peer-reviewed articles are freely available online within six months, where possible under publisher agreements. Authors can adhere with the policy by archiving peer-reviewed manuscripts in an open access repository (e.g. institutional repository) or by publishing in an open access journal. Please consult the policy web site for more detail.

4.4   Guidelines for Research Involving Aboriginal People

The Ethics Office of the CIHR, in conjunction with its Institute of Aboriginal Peoples' Health, has prepared guidelines to assist researchers and institutions in carrying out ethical and culturally competent research involving Aboriginal people. The intent is to promote health through research that is in keeping with Aboriginal values and traditions. These guidelines will assist in developing research partnerships that will facilitate and encourage mutually beneficial and culturally competent research and will promote ethics

review that enables and facilitates rather than suppresses or obstructs research. Further information can be found at http://www.cihr-irsc.gc.ca/e/29134.html.

4.5 Gender and Sex-Based Analysis

Applicants are encouraged to demonstrate the use of gender and sex-based analysis in applications. Gender and sex-based analysis is an approach to research which systematically inquires about biological (sex-based) and sociocultural (gender-based) differences between women and men, boys and girls, without presuming that any such differences exist. The purpose of this line of inquiry is to promote rigorous health research which expands understanding of health determinants in both sexes and results in improvements in health and health care. For further information, please see http://www.cihr-irsc.gc.ca/e/32019.html.

4.6 Official Language Minority Communities

Federal agencies are required to take positive measures to ensure the support and recognition of minority language communities in Canada. For CIHR, this means an obligation to promote health research in these communities. For further information, please see http://www.cihr-irsc.gc.ca/e/34333.html. Research proposals in these areas should still be subject to the same rigorous peer review process as any other application. However, the justification for promoting health research in minority language communities should not be a factor in the assessment.

5 Grants Peer Review Committee Members

A typical CIHR grants peer review committee consists of a Chair, Scientific Officer, peer reviewers, CIHR staff and other specialized roles depending on the funding opportunity. Individual committee members are selected for their research excellence, as reflected by their ability to obtain continued extramural peer-reviewed grant support, and for their breadth of knowledge and maturity of judgment. For peer review membership guidelines, please see http://www.cihr-irsc.gc.ca/e/4653.html. Committees as a whole should also satisfy the need to cover the range of research areas for which the committee is responsible, to appropriately represent the Canadian health research community as a whole, to review in both official languages, and to allow for the logistics of conflict of interest and turnover of committee members. For the procedure for selection of peer review committee members, please see http://www.cihr-irsc.gc.ca/e/4654.html.

CIHR grant competitions can be held on a recurring or an ad hoc basis. For recurring competitions, standing peer review committees are formed, and committee members are recruited for a term of service (typically three years) in order to ensure consistency and continuity in the review process. For ad hoc competitions, committees are formed to review applications for that particular competition and then disbanded. Standing committee membership may be supplemented by additional members as required, based on the applications received and expertise needed for their review.

5.1 CIHR Staff

CIHR staff are typically represented by a Deputy Director and a Program Delivery Coordinator, who are responsible for ensuring the integrity and quality of the peer review process. CIHR staff:

- are involved in the assignment of applications to peer reviewers;
- provide advice and guidance to the committee on CIHR policies;
- keep notes on procedural aspects of the committee's functions;
- record the consensus rating and budget recommendations made by the committee for each application;
- record concerns raised by the committee on issues requiring later attention by staff, for example, overlap of funding, ethics, eligibility, etc.

5.2 Chair

The committee Chair is directly responsible to CIHR for ensuring that the peer review committee functions smoothly, effectively and objectively, according to CIHR's policies. He/she establishes a positive, constructive, fair-minded environment in which the research proposals are to be evaluated. The Chair (and the Scientific Officer) fulfills an oversight role and **does not rate applications before the committee.** His/her responsibilities include:

- working with the Scientific Officer and CIHR staff during the assignment of grant applications to specific peer review committees and during the selection of reviewers for each application;
- ensuring the involvement of the entire committee with recommendations for each grant;
- ensuring that opinions expressed by external reviewers are fully integrated into the discussion of each application for which they have been solicited;
- working with the Scientific Officer to summarize the discussion of each application before the rating;
- working with the Scientific Officer in guiding the committee to a consensus rating;
- working with CIHR staff to manage conflicts of interest;
- ensuring that specific concerns of ethics and other CIHR requirements are addressed;
- appointing a delegate as Chair or Scientific Officer when either leaves because of conflict of interest. Whenever possible, the same individual should not occupy both Chair and SO roles.

5.3 Scientific Officer

In addition to the duties shared with the Chair, as described above, the Scientific Officer:

- supports the Chair in his/her role during the peer review committee meeting;
- takes notes of the discussion as it is proceeding ("SO notes"), which will be sent to applicants with their notice of recommendation;

- ensures that issues of ethics, eligibility, overlap and other concerns that have been flagged for the attention of CIHR are recorded for the applicant.

5.4 Peer Reviewers

CIHR uses the terms "internal" and "external" reviewer to distinguish reviewer roles, as described below:

5.4.1 Internal Reviewers

Internal reviewers are committee members who attend the peer review committee meeting, normally in person but occasionally by teleconference. Applications are assigned to a minimum of two internal reviewers for assessment. Internal reviewers are typically assigned 8 to 10 applications that they review in depth and they submit a written review that is provided to the applicant after the committee meeting. Internal reviewers present their review at the peer review committee meeting and lead the review of applications assigned to them (see also Section 6.2.3). They also participate in the discussion and rating of all other applications before the committee for which they are not in conflict.

Internal reviewers are also assigned other applications as "readers". Readers are responsible only for reading an application and are not required to submit a written review; they serve as a discussant in the committee and aid in reaching a consensus rating.

On occasion, a reviewer with a very specific expertise may be called on to review a small number of applications, typically by teleconference. These reviewers only take part in the discussion of the application(s) they have been assigned, and they rate the application(s) by e-mail to maintain confidentiality.

For certain funding opportunities, other specialized roles may also be required during peer review (see also Section 6.2.5, Merit Review):

- **Decision-makers** are individuals who make decisions or influence policies that have a direct influence on the organization, delivery, financing, management, regulation or delivery of health systems or services. Decision-makers perform internal review for certain applications to ensure meaningful collaboration between researchers and end users of the research.
- **Community representatives** perform internal review for community-based research programs to ensure the relevance of the proposed research and/or the involvement of the designated community as partners.

5.4.2 External Reviewers

In certain cases, a review may be solicited from someone who is not a member of the peer review committee in order to fill a gap in expertise. The external reviewer provides a written assessment but does not attend the meeting. They may also provide an initial rating of the application but this is <u>not used</u> in the calculation of the final rating.

5.5 Community Reviewer

The Community Reviewer is an individual who is not currently an academic or researcher, but who has a demonstrated interest in health and science. The Community Reviewer provides a mechanism for ensuring good communication to public stakeholders and transparency of the peer review process. He/she does not rate applications but comments on the lay abstract of the application, specifically the extent to which the intent and importance of the proposed research is well explained and in a language clear to members of the general public. Specifically, he/she provides written comments on all lay abstracts submitted and selects 5-10 to discuss at the peer review committee meeting in order to highlight strong and weak examples. They are also invited to provide feedback on the proceedings of the committee, such as the quality, quantity and variety of science reviewed, the structure of the discussions, the objectivity of the discussions, and any other general comments. For more information see http://www.cihr-irsc.gc.ca/e/31928.html.

5.6 Observers

Occasionally, individuals are permitted to observe peer review committee meetings. Observers may be CIHR Institute staff or representatives from partner organizations who have no funding decision-making authority for that competition. Observers must adhere to the same Confidentiality and Conflict of Interest Policy as all committee members, and they do not contribute in any way to the review process or discussions surrounding the applications (including any discussions that arise during breaks). Observers may not remove any notes or other information related to the review of applications before the committee from the meeting room.

6 Grant Application Review Process

6.1 Before the Meeting

6.1.1 Assigning Applications

All eligible applications received by the appropriate deadline date (posted in the competition announcement) are entered into the competition. In general, applications must be complete at the time of submission, otherwise they are withdrawn from the competition. Specific exceptions to this rule can be found in the funding opportunity descriptions.

Within two weeks after the deadline, the Chairs and Scientific Officers of the peer review committees meet with CIHR staff to review the applications assigned to their committee. Together, they are responsible for ensuring their committees are equipped with the appropriate expertise and, upon accepting an application for review by their committee, accept responsibility for ensuring that the committee performs a fair review. In some cases, applications may not meet a particular committee's mandate and may need to be reassigned (if the competition has more than one peer review committee). A maximal load for a committee should be not more than 60 applications for a 3-day meeting with no member assigned to review more than 10 (and preferably 8) applications (not including the applications for which he/she is assigned to be reader).

The final authority for the assignment of applications to a peer review committee rests with CIHR.

After the list of applications is compiled, committee members are given access to the application summaries to declare any conflicts of interest and indicate their level of expertise. Note that many of the activities related to peer review, including submission of applications, declaration of conflict of interest, rating of applications, submission of written reviews and notices of decision are now carried out on ResearchNet, a secure online portal which facilitates the peer review process. For a list of programs which are supported by ResearchNet and other information, please see http://www.cihr-irsc.gc.ca/e/28832.html. Information regarding activities for programs not supported by ResearchNet can be obtained through your Program Coordinator.

Chairs, Scientific Officers and CIHR staff then assign the applications to at least three committee members (two internal reviewers and a reader). External reviews can also be solicited if required, as noted above. Internal and external reviewers receive full copies of the applications assigned to them four to six weeks before the peer review committee meeting. Each committee member also receives all the applications (minus appendices) assigned to their committee and has access to all available external reviewer reports.

6.1.2 Reviewing Applications

The internal reviewers' reports include a brief summary of the qualities of the applicants and the research objectives. However, it is still the responsibility of all peer review committee members to familiarize themselves in advance of the meeting with all applications to be assessed by their committee, as well as with any available external reviewer reports. Committee members responsible for written reviews submit them on ResearchNet, or as otherwise specified, according to the deadlines provided to each reviewer with the applications. See Section 7 (below) for the rating of applications.

In advance of the meeting, reviewers are required to complete the following tasks on ResearchNet (for programs using electronic review):

1) upload their reviews;
2) provide an initial rating for each application (note that reviewers are not bound by this initial rating and can change it at the peer review committee meeting);
3) for certain programs, including the Operating Grants Program (OGP), indicate whether each application is in their top or bottom group (compared against applications they have considered in the past five years) based on their overall quality; i.e., those that have a good probability of being funded versus those that do not. This assessment will be used during the streamlining phase of review (Section 6.2.2). The proportion of applications in each group may vary depending on the overall quality of the pool of applications they reviewed.

6.2   During the Meeting

The prime responsibilities of a peer review committee are to evaluate applications submitted for a particular competition, to rate them so that they may be ranked in order

of priority, and to recommend a budget sufficient to support the proposed research if the application is approved. It is important that committees follow defined procedures in order to function in a consistent manner. For a summary of the review procedures for various grant competitions, please see the attached appendices.

Any committee member who has a conflict of interest with an application (as defined in Section 3.2, above) must not take part in the discussion of that application. For face-to-face meetings, committee members in conflict must leave the room before the application is discussed. The Chair and CIHR staff are responsible for monitoring conflicts and for resolving areas of uncertainty.

6.2.1 Attendance at the Committee Meeting

Committee meetings are held usually within four months of the application deadline date and last not more than three days. The effective and fair review of applications depends on all committee members participating for the full duration of the committee meeting. Therefore, if your meeting starts in the morning, please arrive the night before instead of traveling the morning of the meeting, to avoid travel delays. In addition, please avoid planning an early departure to return home at the end of the meeting, in case the meeting runs late on the last day. If the meeting ends early, CIHR will cover certain costs to change your travel plans if necessary. Your Program Coordinator can provide further details and help you plan your itinerary accordingly.

6.2.2 Streamlining

In order to allow reviewers to devote more time to the consideration of applications that have the highest probability of being funded, "streamlining" may be applied to restrict discussion of non-competitive applications (see http://www.cihr-irsc.gc.ca/e/32568.html). Assessment of each application at peer review committee meetings begins with both internal reviewers announcing their initial ratings, to one decimal place. Depending on the program, one of the following two methods may then be applied:

Method 1. An application is streamlined if it meets the following three conditions:
- the average of the internal reviewers' initial ratings is <3.50;
- both reviewers placed the application in their bottom group (Section 6.1.2);
- there is no objection from the other committee members that the application not be discussed.

Method 2. An application is streamlined if it meets the following two conditions:
- the initial rating of both internal reviewers is 2.9 or below;
- there is no objection from the other committee members that the application not be discussed.

If an application is not discussed, the applicant will receive a copy of all internal reviewers' reports (and external reviews, if any) but there will be no Scientific Officer notes. Committee members do not vote on the rating; it is calculated as the mean of the initial ratings of the two internal reviewers.

6.2.3 Rating of Applications

If an application is not streamlined, the discussion proceeds as follows:

- The primary reviewer presents his/her assessment, describing strengths and weaknesses of the proposal (see Section 7.2 for assessment criteria);
- The secondary reviewer follows, concentrating on points of agreement or disagreement with the first, and elaborating points not addressed by the first reviewer;
- If external reviews have been provided, a committee member (typically an internal reviewer, the Chair or the Scientific Officer) reads the reviews;
- The reader may comment on issues that have been raised, or raise additional issues, as appropriate;
- The Chair leads the discussion of the proposal by all committee members;
- The Scientific Officer reads back the Scientific Officer notes, capturing the key elements of the discussion to be considered when rating the application;
- The Chair seeks a "consensus rating" from the two internal reviewers. The internal reviewers may revise their initial ratings as they see fit. If a consensus cannot be reached, the mean value of the ratings of the two internal reviewers is used (round up, if necessary, to obtain a single decimal point);
- All committee members, including the two internal reviewers but excluding the Chair and Scientific Officer, then cast individual confidential votes within ±0.5 of the consensus rating. The internal reviewers are not bound to the consensus rating. The rating assigned to the proposal is the average of these confidential votes. A vote is taken even if the consensus rating is <3.5 (i.e., not in the fundable range), but the budget discussion following the vote should be brief.

6.2.4 Review of Lay Abstracts

After the rating of the application, the Community Reviewer (if present) provides comments on a selection of lay abstracts that he/she has chosen to highlight to the committee. The Community Reviewer addresses the extent to which the intent and importance of the proposed research is well explained and in a language clear to members of the general public.

6.2.5 Merit Review

Applications to certain funding opportunities are judged by merit review, which specifies separate scores for scientific merit and potential impact. In general, the potential impact score reflects the proper engagement of partners and/or relevance to the appropriate knowledge users. Therefore, while the overall procedure for rating an application is as above, there are two separate scoring components instead of one and the internal reviewer makeup differs (see Section 5.4.1). The sequence of steps for review of applications in the PHSI and CBR-HIV/AIDS programs that use merit review are described in Appendices III and IV. Please see the descriptions of the relevant funding opportunities for further details of peer review and evaluation.

6.2.6 Budget and Term

The appropriateness of the budget and the term of support are discussed, and

recommendations are made (see below). Please see Section 8 for guidelines. Note that questions about the budget should not influence the rating of the application, unless they bear directly on the scientific merit.

6.2.7 Flagging of Grants

Any concerns in the following areas should be discussed and, if necessary, flagged for CIHR staff to address. These issues are not to be considered as criteria for evaluation, except as they may impact on the scientific quality of the application. For detailed regulations concerning these issues, please see the Grants and Awards Guide (http://www.cihr-irsc.gc.ca/e/805.html).

1) *Eligibility*: Reviewers should raise any concerns with respect to whether the Principal Applicant(s) and their affiliated institutions meet the criteria to receive CIHR funding.

2) *Overlapping sources of funds*: CIHR will not accept an application if the same (or very similar) grant proposal is submitted in response to another program (including organizations outside of CIHR) with overlapping review periods. In addition, if a grant is currently held to perform some or all of the same research as that proposed in the application, then the overlap should be flagged and if the grant is awarded, CIHR staff will reduce the budget of the grant by the amount of the overlap.

3) *Ethics*: Responsibility for ensuring that all research meets ethical standards is delegated to the local institution by CIHR. Ethics forms are not required as part of the application. However, the reviewer may comment on specific issues, such as the use of human subjects, animals, human tissues or hazardous material, if they feel they have not been adequately addressed.

4) *Research involving Aboriginal people*: For competitions launched after July 1, 2008, research proposals that involve Aboriginal people must include a research agreement or letter of support from the Aboriginal groups involved, as outlined in the Guidelines for Research Involving Aboriginal People (http://www.cihr-irsc.gc.ca/e/29134.html). Research that appears to involve Aboriginal people should be flagged for CIHR staff to determine if a research agreement is required.

5) *Human pluripotent stem cell research*: Applications involving the use of human stem cells and likely to be funded will also be reviewed by the Stem Cell Oversight Committee (SCOC). Applicants are instructed to check the relevant box in the section entitled "Certification Requirements", but it is essential that this be verified by committee members.

6) *Budget justification*: If the peer review committee cannot properly assess the budget request because of an unclear justification by the applicant, please bring the issues to the attention of CIHR staff who will follow up before funds are released, if the application is funded.

6.2.8 End of Meeting Review

Once all applications have been reviewed, if the peer review committee feels that any application(s) has been treated inconsistently, re-review of one or a small number of

applications is permitted. Any committee member with a conflict of interest must again leave the room. Following discussion, a consensus rating is determined by the two internal reviewers and voting proceeds as before. The committee does not review the overall rankings of all applications at the end of the meeting as individuals with conflicts of interest would inevitably be present during such a process.

An essential component of any peer review committee meeting is the final review of the committee's effectiveness and functioning, and a discussion of policy issues that may have arisen in the course of its deliberations. This discussion provides an opportunity for CIHR staff to address any concerns of the committee members and for staff to record feedback on the peer review process as part of CIHR's ongoing efforts to maintain an effective and high quality peer review system.

6.2.9 Newsworthy and Highly Rated Applications

At the conclusion of the peer review committee meeting, the committee is asked to identify those applications that are most newsworthy, highly rated, and/or likely to create public interest. As part of CIHR's mandate to engage the Canadian public and report to Parliament on its research initiatives, the Communications and Marketing department will use these suggestions to develop news stories and backgrounders for parliamentarians, key Ministers and decision-makers. In addition, the information gathered can be used for corporate publications and other activities highlighting CIHR's research efforts with key stakeholders.

6.3 After the Meeting

The Subcommittee on Programs and Peer Review (SPPR) considers the committee recommendations as soon as possible after the peer review committee meetings and makes funding recommendations to the RKTC for final decisions. A list of successful applicants is posted at http://www.cihr-irsc.gc.ca/e/25845.html as soon as it is available.

Applicants are informed of the results of the competition as follows:

1) For some competitions, applicants receive a copy of all reviews and the Scientific Officer notes as soon as they are available after the peer review committee meetings, and are informed of the rating and ranking of the application in the committee (Notice of Recommendation). This enables applicants whose applications are unlikely to be approved for funding by the RKTC to begin to plan a resubmission, where applicable, and to register for subsequent competitions.

2) Once the RKTC has approved the grants to be funded, all applicants are sent a Notice of Decision, indicating whether or not their proposal was approved, and if approved, with what budget, which may or may not coincide with that recommended by the peer review committee. The Notice of Decision will normally be released (either on ResearchNet or by mail) within three weeks following the RKTC meeting.

Applications which have been flagged for Special Attention (see Section 6.2.7) are withheld as "pending". The applicant will be notified if further information is required.

The additional information may be discussed by CIHR staff and peer review committee members if necessary prior to a final decision regarding funding.

7   Rating of Grant Applications

7.1   Types of Applications

For standing competitions like the Operating Grants Program (OGP), applications may be new proposals, renewals of previously funded projects, or resubmissions of an unsuccessful new or renewal application. All application types are evaluated together "on a level playing field" and the same criteria and funding cut-offs are applied to all, though peer review committee members are reminded to take the stage of career and progress made during previously funded grants into account and to vary the emphasis placed on track record and training experience appropriately. Where applicable, resubmissions may contain a two page response to previous reviews of the applications. This response, along with corresponding modifications to the research plan, is expected to improve the quality of the application. However, committee members are not provided with copies of previous reviews and must still rate resubmissions relative to other applications in the competition.

In some cases, the same peer review committee may review applications for more than one funding opportunity. For example, an OGP committee may also review applications for a strategic funding opportunity (also called a Request for Applications or RFA). At the conclusion of the committee meeting, these applications will be separated into their own overall ranking lists and funding decisions will be made based on the funding envelopes provided through their respective programs. Therefore, the presence of these applications will have no impact on the funding of other applications being reviewed by a committee.

7.2   The Internal Reviewer Report

The internal reviewer report should include the following:

1. A brief assessment of the applicant:

   - for new investigators, comment particularly on the training and research experience;
   - for those applying for a renewal of a grant, comment on the relevant research experience, significant contributions to the field and the productivity during the present period of funding.

2. A brief synopsis of the proposal:

   - the purpose of the proposal;
   - the hypothesis to be tested, or the questions to be answered;
   - the objectives to be achieved;
   - the approach proposed;
   - the progress made to date.

3. An assessment of the proposal. Discuss the strengths and weaknesses of the project in relation to:

- The appropriateness of the **research plan**, including its feasibility and the use of the best available methodology;
- The **significance** of the work proposed and its **originality**, or novelty of the concepts, ideas or hypotheses being pursued in the application. CIHR wishes particularly to support original and innovative health research;
- The suitability of the **research environment**, including the availability of facilities, personnel, and time, required to complete the work proposed.
- The **impact** or importance of the work proposed; the likelihood that it will, directly or indirectly, lead to the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products, and a strengthened Canadian health care system.

4. If necessary, comments on issues the reviewer feels should be flagged as described in Section 6.2.7. These concerns should not influence the rating or budget recommendations, unless they bear on the scientific merit of the application.

5. Comments on the budget requested and a formal recommendation. If budget cuts are recommended, clear and detailed reasons should be provided.

The review should be clear and concise, using objective and non-inflammatory language, and include justification. Constructive advice to the applicant will allow him/her to improve the quality and efficiency of the proposed research. The applicant will receive the review as it is submitted by the reviewer. For this reason, please do not identify yourself in order to ensure the confidentiality of the review process.

7.3 The Rating

Criteria to assess the scientific merit of an application are as described above in Section 7.2. The relative weighting of these criteria depends on the program objectives as described in the funding opportunity description; if in doubt, please contact the Deputy Director responsible for the committee.

To ensure consistency, all reviewers must adhere to a common scale. It is particularly important that the full scale be used and the same conventions applied to assigned ratings. To facilitate this, the following scale and descriptors should be used:

Descriptor*	Range**	Outcome
Outstanding	4.5 – 4.9	**May Be Funded –**
Excellent	4.0 – 4.4	**Will be Discussed**
Very good	3.5 – 3.9	**by the Committee**
Acceptable, but low priority	3.0 – 3.4	
Needs revision	2.5 – 2.9	**Not Fundable –**
Needs major revision	2.0 – 2.4	**May or May Not be Discussed**
Seriously flawed	1.0 – 1.9	**by the Committee**
Rejected	0.0 – 0.9	

*Only applications rated 3.5 or higher are eligible for CIHR funding. The range 3.0 to 3.4 should be used for applications which, while technically and conceptually acceptable, are not considered to be a high priority for CIHR funding, perhaps because the topic is not considered relevant to an important health issue, or because the work proposed seems unlikely to yield major advances in knowledge, or because the approach is not particularly innovative. Please note that applications rated 3.0 to 3.4 are not eligible for CIHR funds, including those from partnership programs, and might not be discussed by the committee; however, applicants are encouraged to re-apply after addressing the reviews. Applications rated below 3.0 are so flawed in some respect that they do not represent a good investment of public funds, and would require significant rewriting to be considered acceptable. Such applications will normally be streamlined, and not be discussed by the committee.

**In the committee meetings, reviewers assign scores to one decimal place, but the final average rating is calculated to two decimal places. When two decimal places are used, the ranges become 4.50 - 4.99, 4.00 - 4.49, etc.

Merit Review (Section 6.2.5) employs separate scores for Potential Impact and Scientific Merit. The following scale should be used for programs assessed by Merit Review:

	Potential Impact*	Range**	Scientific Merit
May Be Funded	Enormous	4.5 – 4.9	Outstanding
	Extremely Significant	4.0 – 4.4	Excellent
	Very Significant	3.5 – 3.9	Very good
Not Fundable	Significant	3.0 – 3.4	Acceptable, but low priority
	Moderate	2.5 – 2.9	Needs revision
	Limited	2.0 – 2.4	Needs major revision
	Negligible	0.0 – 1.9	Seriously flawed

*Only those applications that exceed the threshold rating of 3.5 on both Potential Impact and Scientific Merit will be considered for funding. The mean of the two scores will be calculated for the applications with a rating of 3.5 and above on both criteria to determine the final rating and establish a ranking list.

**In the committee meetings, reviewers assign scores to one decimal place, but the final average rating is calculated to two decimal places. When two decimal places are used, the ranges become 4.50 - 4.99, 4.00 - 4.49, etc.

8 Budget and Term Determinations

CIHR's objective is to provide the funds needed to allow approved research to be carried out effectively. To ensure the highest level of accountability in the process, it is critical that reviewers give the budget justification a full and thorough review so that funds are distributed as effectively as possible. The appropriate budget is very much a matter for judgment by the peer review committee. Some areas of research are more expensive than others. In addition, for a potentially fundable application, committees may recommend funds for only those parts of the proposed research deemed worthy on scientific grounds.

Peer review committees should use a zero-based approach to determine the funds required for the research thought worthy of support. In other words, the budget for each year must be built "from the ground up" with each line item justified. A percentage change from current funding is <u>not</u> an appropriate rationale for a budget. Committees should <u>not</u> make their budget recommendations in the context of perceptions of CIHR's budget; the RKTC itself will modify the amount for each grant if it feels it is necessary.

The sum of research staff, trainees, and materials and supplies gives a total annual operating budget recommendation. For some types of research (e.g., biomedical laboratory research) this sum is usually rolled over from year to year, while other projects (e.g., clinical trials, epidemiological studies etc.) may require differing amounts of support in different years. In the latter case, the recommended amounts, by year, should be specified.

If the peer review committee feels that the budget is not adequately justified or explained in order to assess the request appropriately, the committee may request a follow-up by CIHR staff. If the proposal is approved for funding, funds will not be released until the budget justification concerns are resolved.

Consideration of the budget should include the following factors:

8.1 Research Staff

Research staff (research associates, research assistants, technicians, etc.) should be determined by the actual needs for the techniques and work required for the research. The salary scales put forward by the institution should be followed, especially if the positions of people already employed are to be continued. A starting salary should not be substituted for the higher salary of a named incumbent with a record of continued employment with the applicant. Some institutions require non-discretionary benefits packages for staff (e.g. supplementary medical and dental insurances). These are considered eligible expenses on grants and can be requested as part of operating grant budgets. Salaries for applicants (Principal Investigators or Co-Investigators) cannot be paid from the grant or any other CIHR grant, except in the case of research associates and trainees, when the salary or stipend should be addressed in the budget justification.

Graduate students may be hired as research personnel on a grant. In general this is on a part-time basis, i.e., hourly. This situation is to be distinguished from a graduate student receiving a stipend from a grant (see below), in which case the work done is part of the training of the student and constitutes the thesis or comparable academic requirement.

8.2   Trainees and Undergraduates

The awarding of trainee positions should be on the basis of the quality of the training environment. The committee's judgment of the quality of training will be influenced by such factors as the rating given the project, the nature of the research program and the project(s) on which the trainee(s) might work, the track record of the applicant in training young researchers, and the environment within which the applicant is working. It is helpful, but not essential, that the applicant has identified the project to which the trainee(s) will be assigned.

Stipends requested for trainees from CIHR must observe the current guidelines, which can be found in the Grants and Awards Guide (http://www.cihr-irsc.gc.ca/e/805.html). These amounts are both the minimum to be paid to a trainee and the maximum that may be requested from a CIHR grant. Some institutions require non-discretionary benefits packages for trainees (e.g. supplementary medical and dental insurances). These are considered eligible expenses on grants and can be requested as part of operating grant budgets when a trainee is recommended. **Note that the payment of tuition fees is not an eligible expense on a grant.**

8.3   Material, Supplies, Services and Travel

A budget should be established for materials and supplies, consumables, animal costs, etc., to include all non-personnel requirements for funds. To facilitate budget revisions, committees may wish to build these totals by categories (e.g., animals, isotopes, chemicals or other reagents, glassware, computer software packages, payments to subjects, access to databases, data analysis, printing, publication costs, travel for research personnel or research subjects). Alternatively, committees may wish to make blanket estimates of the usual operating and travel costs per research worker (which will vary according to the type of work being done), though special costs (e.g., travel for collaboration, or unusual animal care or maintenance costs) should not be forgotten.

In general, CIHR grant funds may be used to cover only the direct costs of research and may not be used for indirect costs, e.g., library, heat and light, office furniture, regular telephone rates etc. (see http://www.nserc.ca/professors_e.asp?nav=profnav&lbi=f3 for further details). If a budget request includes amounts for what may seem to be indirect costs or "overhead," these need to be justified in terms of their direct contribution to the research. For example, a contribution to the salary of a glassware washer or technician to operate a common piece of research equipment is allowable, while a departmental "tax" to cover costs other than research expenses (e.g., library acquisitions, graduate student stipends, secretarial pool etc.) is not allowable. The latter should normally be covered by the institution. When in doubt, such costs should be flagged for CIHR staff to follow up.

8.4 Equipment

Depending on the program, equipment costs may be requested for identified items required to do the research. Funding for equipment should be requested in the first year (regardless of what year it is required) and will be awarded as a one time payment during the first year of the grant.

A cost quotation must be provided for equipment or service contracts greater than $10,000. Two competitive quotes as well as letters from an appropriate institutional official documenting the availability and status of similar equipment are required for items costing more than $25,000.

8.5 Overlaps with other Funding Sources

Peer review committees are asked to recommend budgets for grant applications irrespective of other sources of funds received or applied for, i.e., committees should not reduce recommended budgets to take into account potential overlap. However, if there is evidence of overlap with other actual or potential sources of funds, the application should be flagged by the committee with comments made on the overlapping sources, and the extent of the overlap. This information will be followed up by CIHR staff, with further consultation with committee members as required and adjustments to the budget made as appropriate.

8.6 Term of Support

The term of support should be a direct reflection of the amount of time the peer review committee feels is necessary to complete the proposed work, if funded. Reviewers should be particularly mindful of the fact that it takes some time for a new investigator to build up a research program and momentum can be jeopardized by having to apply for renewal within a short time after having received a first grant. If, on its merits, a potentially fundable application requires a longer term to fulfill its objectives, it is inappropriate to limit the term to "hedge" against a new investigator's inexperience. In addition, committees may be reluctant to provide long term support for an application for which feasibility of the entire program depends on a positive outcome to initial experiments. In these cases, a 1 or 2 year term may be appropriate for an application that has a high element of risk, such that more substantive proof can be obtained, but it is inappropriate to limit the term of support simply because a proposal is untested or innovative.

APPENDIX I: Sequence of Steps for Review of an Application in the Operating Grants Program (OGP)

1. The two internal reviewers announce rating	8. Consensus rating by internal reviewers: • use full scale • check consistency with previous applications • If consensus cannot be reached, use mean of internal reviewers' ratings.

2. Assessment of overall quality:
Review is terminated if the following conditions are met:
  i. application is flagged as not being competitive (considered not to be in top group of applications by either reviewer)
  ii. the mean of the rating of the two internal reviewers is <3.50
  iii. there is no objection from other committee members
Committee members will not vote and no budget discussions will occur. The rating is calculated as the mean of the rating of the two internal reviewers.
	9. Individual ratings:
	• ± 0.5 of consensus rating
	• confidential vote
	• internal reviewers are not bound to consensus rating
	
	10. Community Reviewer (if present):
	• provides comments on a selection of lay abstracts that he/she has chosen to highlight to the committee
	• comments on the extent to which the intent and importance of the proposed research is well explained and in a language clear to members of the general public

3. Internal Reviewers:
• just enough summary to introduce grant
• review application and track record:
  – research plan, methods
  – originality
  – track records of applicants
  – research environment
  – potential impact
 	
4. External Reviewers:
• Chair identifies external reviewers
• internals or SO present external reviewers' comments
	11. Budget:
	• not required if application is not discussed or if all members agree to vote ≤3.4 following discussion
	• annual operating base: in some applications, requested amounts may vary in different years
	• trainees: excellence of training and environment
	• equipment: justification, itemized, awarded in 1st year

5. Reader raises additional issues	12. Term of grant
6. Discussion of application should focus on: • factors important in rating • differences of view between reviewers	13. Issues to be flagged: • ethics • overlap • eligibility • human stem cells • Aboriginal people • budget justification
7. SO reads SO notes to the committee: • summary of discussions • strength and weaknesses of application	14. Scientific Officer reads final notes (including budget comments) for review / modifications / additions by committee

Once all applications have been reviewed:

Examine consensus ratings and **if** committee believes there has been significant drift in standards, re-review of **one or a few** applications is permitted. Any committee member with a conflict of interest must again leave the room. Following discussion, a consensus rating is determined by the two internal reviewers and voting proceeds as before.

Identify a highly rated application that is the most newsworthy or likely to create public interest, for use by CIHR Communications Branch to develop news stories and backgrounders for Parliamentarians etc.

Discuss policy and procedural issues that may have arisen in the course of the deliberations of the committee meeting. CIHR values your comments and suggestions to improve the peer review process.

APPENDIX II: Sequence of Steps for Review of an Application in a Strategic Funding Opportunity (RFA) Competition

1. The two internal reviewers announce rating	8. Consensus rating by internal reviewers: • use full scale • check consistency with previous applications • If consensus cannot be reached, use mean of internal reviewers' ratings.
2. Triage: Review is terminated if the following conditions are met: i. The initial rating of both internal reviewers is 2.9 or below ii. there is no objection from other committee members Committee members will not vote and no budget discussions will occur. The rating is calculated as the mean of the rating of the two internal reviewers.	9. Individual ratings: • ± 0.5 of consensus rating • confidential vote • internal reviewers are not bound to consensus rating

3. Internal Reviewers:
• just enough summary to introduce grant
• review application and track record:
   – research plan, methods
   – originality
   – track records of applicants
   – research environment
   – potential impact
4. External Reviewers:
• Chair identifies external reviewers
• internals or SO present external reviewers' comments
	10. Budget:
	• not required if application is not discussed or if all members agree to vote ≤3.4 following discussion
	• annual operating base: in some applications, requested amounts may vary in different years
	• trainees: excellence of training and environment
	• equipment: justification, itemized, awarded in 1st year

5. Reader raises additional issues	11. Term of grant
6. Discussion of application should focus on: • factors important in rating • differences of view between reviewers	12. Issues to be flagged: • ethics • overlap • eligibility • human stem cells • Aboriginal people • budget justification
7. SO reads SO notes to the committee: • summary of discussions • strength and weaknesses of application	13. Scientific Officer reads final notes (including budget comments) for review / modifications / additions by committee

APPENDIX III: Sequence of Steps for Review of an Application in the Partnerships for Health System Improvement (PHSI) Program

1. Rating: the two internal reviewers announce their two ratings: one each for the Potential Impact of the research and the Scientific Merit of the proposal.	7. Consensus rating by internal reviewers: • use full scale • check consistency with previous applications If consensus cannot be reached, use mean of internals' ratings.
2. Triage: (OPTIONAL): An application does not need to be discussed if: • the mean of the rating of the two internal reviewers of either criteria is < 3.0 (LOW TRIAGE), • there is no objection from other committee members Committee members will not vote and no budget discussions will occur. The rating is calculated as the mean of the rating of the two internal reviewers. No budget recommended and no SO notes are taken.	8. Individual ratings: • ±0.5 of consensus rating • confidential vote • Internal reviewers are not bound to consensus rating
3. Internal reviewers: • just enough summary to introduce grant • review applications strengths and weaknesses (as per evaluation template)	9. Budget: Should be discussed for all applications that will potentially be in the fundable range (≥ 3.50) • comments on budget relative to project • verify minimum matching requirements
4. Reader raises additional issues.	10. Term of grant
5. Discussion of application should focus on: • factors important in rating • differences of view between referees • one or more of the relevant themes should be addressed.	11. Issues to be flagged: • ethics • overlap • eligibility • human stem cells
6. SO reads SO notes to the committee: • summary of discussion • strengths and weaknesses of application.	12. Scientific Officer reads final notes (including budget comments) for review / modifications / additions by committee

APPENDIX IV: Sequence of Steps for Review of an Application in the Community-Based Research (CBR) HIV-AIDS Program

1. **Initial ratings**: The two reviewers* announce their two initial ratings: one for the Potential Impact (PI) and one for the Scientific Merit (SM) of the proposal. Note: The proposed budget and ethical issues should not have any impact on the ratings assigned to the project.	7. A **Consensus** score for both PI and SM is reached by the two reviewers by: • using the full Merit Review scale; • ensuring consistency with previous applications. If a consensus score cannot be reached, the mean of the two initial ratings will be used.
2. **Triage**: (OPTIONAL) An application does not need to be discussed if: • the mean of the rating of the two internal reviewers of either criteria is < 3.0; • there is no objection from other committee members. Committee members will not vote and no budget discussions will occur. The final ratings are calculated as the mean of the four respective scores (PI and SM) initially announced by the primary and secondary reviewers. No budget recommendations and no SO notes are taken.	8. **Individual ratings**: • Committee members vote +/- 0.5 of consensus ratings (PI and SM); • Votes are confidential; • The two reviewers are not bound to consensus ratings. Note: The two final ratings assigned to the proposal are the averages of these confidential votes that will be calculated by CIHR staff after the committee meeting and (see *Scoring Process* below).
3. **Reviewers**: 1st reviewer: give a background summary of the proposal; review application's strengths and weaknesses (based on the evaluation criteria from the Request for Applications). 2nd reviewer: concentrate on points of agreement or disagreement with the 1st reviewer, and elaborating points that may not have been addressed by the later.	9. **Budget**: Should be discussed for all applications that will potentially be in the fundable range (≥ 3.50) • Comments on budget relative to project; • Verify minimum matching requirements. Note: if one or both of the consensus scores fell to 2.9 or lower as a result of the committee discussion, no budget discussion is needed.
4. **Readers*** may wish to comment further on issues that have already been raised, or may wish to raise additional issues, as appropriate.	10. **Term of grant**: The length of the term of support is determined.
5. **Discussion** of application should focus on: • factors important in rating; • differences of view between reviewers.	11. **Issues** to be flagged: • ethics; • budgetary overlap; • eligibility.
6. **Scientific Officer** reads his or her notes to the committee: • summary of discussion; • strengths and weaknesses of application.	12. **Scientific Officer** reads final notes (including budget and issues comments) for validation and to obtain further possible input from the committee.

*Each application will be reviewed by **two reviewers**—one *primary* and one *secondary*—and **two readers**. One reviewer and one reader will focus on the assessment of the Potential Impact (PI) of the project, whereas the other reviewer and reader will focus on the assessment of the Scientific Merit (SM). Readers will act as discussants and do not need to provide a written review.

SCORING PROCESS

Potential Impact		Scientific Merit	
Initial rating (e.g. 3.4) *1st reviewer*	Initial rating (e.g. 3.8) *2nd reviewer*	Initial rating (e.g. 3.6) *1st reviewer*	Initial rating (e.g. 4.0) *2nd reviewer*
Consensus rating (e.g. 3.5)		Consensus rating (e.g. 3.7)	
Final rating * (e.g. 3.54)		Final rating * (e.g. 3.82)	
Ranking rating ** (e.g. 3.68)			

* Average of confidential votes—calculated by CIHR database after the meeting.
** Average of the two final ratings—used to establish the ranking of applications for a particular competition.