

## KEY TIPS

- Begin writing early! Give yourself at least 3 months to prepare and refine your proposal.
- Communicate your ideas **clearly and concisely**. Any technically competent reader should be able to identify the key themes and methods of your proposal within 3 minutes of scanning/reading.
- You can only be assessed on the **contents of your application package**. Never rely on reviewers to use their good judgment to infer the suitability of your proposed methods, value of your recent progress or benefit of your training objectives.  
**Reviewers are not allowed to make any assumptions.**
- Ensure you allow enough time for peer review and to incorporate suggested changes. Have a minimum of two **colleagues review your proposal** before it is submitted. Encourage them to pick out any weaknesses in the proposal.
- Ensure that you send your application to the **correct Peer Review Committee**. Check CIHR's website to determine the types of grants a particular peer-review Committee has supported in the last two years. If CIHR suggests another peer-review Committee, respond to the suggestion promptly, either with your agreement or with your suggestion of an appropriate alternate Committee. Be aware that some members of a CIHR peer-review Committee, as listed on the website, may not be participating in a particular competition. For a Committee listing please go to: <http://www.cihr-irsc.gc.ca/e/4657.html>
- ◆ Multi-disciplinary grant applications, with multiple co-applicants, are receiving increasing attention and ranking by some peer-review Committees.
- ◆ Grant applications must be original, with high scientific significance and relevance for the health of Canadians. Operating Grants are typically evaluated according to 5 criteria, described here: <http://www.cihr-irsc.gc.ca/e/39914.html>; note other criteria may apply to priority announcements, so review the funding opportunity carefully.
- ◆ **Make it easy for reviewers**, that is, use section headings (major and sub-headings) to help reviewers 'find things', use short paragraphs, summarize often and leave blank lines where possible. Recall proposals you have reviewed that were a pleasure to read and ensure you use the same techniques in writing your proposal. This demonstrates that you care.
- ◆ **Write with a reviewer in mind**: do everything you can to help reviewers understand your idea, why it is important and why it is reasonable and feasible.

## RESUBMISSIONS

- ◆ A re-submission must catch the attention of the Committee members, in particular, the assigned internal reviewers. It may be advantageous to involve a co-investigator, thereby bringing her/his complementary expertise to make a key contribution to the theme of the proposed research program. Incorporate the new expertise throughout the application.
- ◆ Consider re-submitting your application to the same peer-review Committee and to structure the response-to-previous-reviews section appropriately.

## APPLICATION TIPS, SECTION-BY-SECTION

### Summary of Research Proposal (max. 1 page)

#### TIPS:

- *Your summary will be used to assess your fit with the peer review committee and to assign reviewers.*
  - *Reviewers have multiple proposals to assess. A carefully prepared summary is a reviewer's best friend. You should spend a great deal of time on it!*
  - *Use relatively plain language, so that it may be understood by someone outside of your field (e.g. write to a grade 10 level using Microsoft Word's readability tools: the Flesch Reading Ease and Flesch-Kincaid Grade Level tests).*
  - *Use active language (avoid passive voice)*
  - *Use an analogy to explain complex problems*
  - *In one page, you should give a reviewer enough material to write a summary of your proposal without needing to read the entire grant.*
- Introductory paragraph: Get the reviewer excited about your proposal
    - Statement of problem (the broader context for your project, include statistics to show scope)
    - Overview of background information (highlight what isn't known in the field and why it's important to solve these unanswered questions)
    - One sentence to lead into what you intend to do: "our primary goal/objective is..." (in broad terms, what you hope to accomplish)
  - Subsequent paragraphs, clearly state:
    - **Hypotheses** (if applicable)
    - **Preliminary data** (summarize if available)
    - **Specific Aims or 'Secondary Objectives'** (specific, attainable, measureable; include numbering system, so that you can refer to specific aim #1, specific aim #2 etc.)
    - **Methods** (summarize)
    - **Results/Outcomes:**
      - What results do you expect?
      - What outcomes do you expect? e.g.: new targets for therapeutic interventions; new knowledge to inform practice/policy; training of HQP (be specific by providing level and numbers of HQP)
    - **Significance:** include a statement about the significance/relevance of your proposed project for the health of Canadians, health services, and/or health care system

**Lay abstract** (max. 2000 characters)

*TIPS:*

- *Your lay abstract must be in plain language (write with a family member/non-scientist in mind).*
- *Avoid acronyms and jargon.*
- *CIHR uses this information to inform the public and Parliament about the value of research supported with public funds – use this paragraph as your ‘elevator pitch’ to show why your project is worth investing in.*

Include:

- Nature of the work (think ‘big picture’ context)
- Why and to whom research is important (i.e. what is the issue?)
- Overall goal and objectives of project
- Brief mention of research methods
- Anticipated outcomes of research
  - Hint: include research outcomes
  - Hint: include training of HQP
- How your field and/or Canada will benefit

**Summary of Progress** (max. 1 page)

*TIPS:*

- *Do not include references, tables, charts, figures or photographs.*
- *Translate some of the highlights of your CV in this section.*
- *Position your research in the field and set the table for your forward objectives.*
- *Stress what you have achieved to date*
- *Complete this section whether you are submitting a new proposal or a renewal*

Include:

- Relevant publications and previous grants held
- Preliminary data (if available)
- Overview of feasibility (e.g. infrastructure support, collaborations secured, access to data etc.)
- **Renewals:** summarize objectives, aims and progress under the current grant and identify the term of your current CIHR grant. Emphasize the most important results to date (include publications and training).
- **New Investigator and Clinician Scientist:** describe research undertaken as a trainee, and, if applicable, as an independent investigator. In addition, address your research relationship with previous supervisor(s). For Industry-partnered Research Chair, describe the research you have been engaged in over the last five years and the results obtained.

**Response to Reviewers** (max. 2 pages)

*TIPS:*

- *There is no “official” memory of previous submissions (that is, the committee does not see previous applications or comments on those applications).*
- *A thorough, logical response to previous reviews is critical.*
- *A re-submitted application is normally assigned to one new Committee member and a Committee member who has reviewed the application in the last competition.*
- *Be positive in tone.*

Introductory paragraph:

- Thank the Scientific Officer and referees for their feedback
- If you received a high ranking in the last round, a statement to this effect would be helpful.
- Summarize positive feedback from reviewers before systematically addressing concerns raised in subsequent paragraphs.

Subsequent paragraphs:

- Address the key concerns of the **Scientific Officer’s notes** that summarize the Committee discussion, the internal reviewers and the external referees.
- Summarize concerns into **sub-headings**. Address each concern specifically and indicate how the proposal has been revised accordingly. If you do not agree with a concern raised, provide a strong justification/rationale for your decision (ensure that your response acknowledges the reasoning behind the reviewer feedback and does not come across as defensiveness).

**Research Proposal** (max. 11 pages if 1-2 applicants; max. 13 pages for 3+ applicants)

**TIPS:**

- *Page limits do not include appendices.*
- *The research proposal should stand alone and should not depend on information in the appendices.*
- *Must be **text only**. Attach any references, tables, charts, figures, photographs, questionnaires and consent forms, etc., in the Appendix.*
- *Title pages and table of contents at the beginning of the research proposal will count towards the total pages allowed and are, therefore, best avoided.*
- *Keep language as simple as possible.*
- *Tell a 'story'; **use examples, metaphors and/or analogy** to help reviewers understand what you want to do and why it's important. These writing tools can help to convey complex ideas simply and can help distinguish your application (if used appropriately).*
  - *Remember your audiences: primary and secondary reviewers can be non-experts who you need to excite about the project; external reviewers include experts who are already excited about your field who need to be convinced that you understand the field and have designed a rigorous project to address key problems.*
- *Ensure that **you are making a case for funding** and not just describing your project. Your proposal needs to offer a justification for the work to be carried out by offering a compelling argument.*

Include the following or similar headings and use sub-headings (e.g. numbering and sub-numbering system to help reviewers with information flow and so that you can refer to other sections as needed):

**1.0 Overview of proposed research** (~1 page)

- Context for your proposal including scope of problem and broader relevance
- ***What you want to do:*** summary of overall goal and specific objectives/aims, hypotheses/research questions
- ***Why this is important*** (new knowledge to be obtained, improvements to health which will result) Emphasize broader 'problem' and how this project seeks to solve it.

**2.0 Background and Rationale** (~3-4 pages)

- ***Why this is a reasonable thing to do*** (review of previous work done on the subject matter and rationale for this project). Review literature relevant to your aims in the same sequence as suggested in the aims (refer to related aim(s) directly). Cite recent, important literature succinctly. Detail preliminary data showing feasibility of proposal and cite any related publications.

3.0 Research Plan (~ 5-6 pages):

- **How you are going to do it** (detailed description of methods, sampling frame and power/sample size calculation (if applicable), data collection, analysis and discussion/interpretation of results, pitfalls, ways around the pitfalls, alternatives, ethical considerations, summarize workplan and timeline).
- Distinguish overall research design/methodology from specific methods. Review each specific aim/objectives and use sub-numbering when describing several methods relevant to one aim. Explain why this particular approach was chosen to address the problem.

4.0 Research Team (~½ - 1 page)

- **Why YOU should do it** (relevant prior experience and skills, collaborators for technical gaps, evidence of solid collaborations (esp. for multi-centre studies), cite your relevant publications). Describe your research environment and what opportunities exist for the training of HQP.
- **What you and any other Principal Applicant(s) and/or Co-Applicant(s) will do** (description of roles)

5.0 Significance (~½ -1page)

- What results and outcomes do you expect?
- **Will the outcomes be significant in your field and/or for the health of Canadians/health care system** (new knowledge, training of HQP, clinical or population health impact, improved health services, etc.).

6.0 Knowledge Translation Plan (~½ page)

- **How you will share research results** (describe your dissemination plan in detail) Consider all potential audiences of your research including academic and non-academic and provide specific plans for how you will reach these audiences (be creative!).
- (if applicable) **What strategies may support the use of your research findings** (how will you engage with potential 'knowledge-users' who can make informed decisions about health policies, programs and/or practices?)

**A note about “KT” at CIHR:**

There are two types of Knowledge Translation at CIHR:

**1. End of Grant KT**

In end of grant KT, the researcher develops and implements a plan for making knowledge users aware of the knowledge that was gained during a project. Therefore, end of grant KT includes the typical dissemination and communication activities undertaken by most researchers, such as KT to their peers through conference presentations and publications in peer-reviewed journals.

End of grant KT can also involve more intensive dissemination activities that tailor the message and medium to a specific audience, such as summary briefings to stakeholders, interactive educational sessions with patients, practitioners and/or policy makers, media engagement, or the use of knowledge brokers. The commercialization of scientific discoveries is another form of end of grant KT.

**2. Integrated KT**

In integrated KT, stakeholders or potential research knowledge users are engaged in the entire research process. By doing integrated KT, researchers and research users work together to shape the research process by collaborating to determine the research questions, deciding on the methodology, being involved in data collection and tools development, interpreting the findings, and helping disseminate the research results. This approach, also known by such terms as collaborative research, action-oriented research, and co-production of knowledge, should produce research findings that are more likely to be relevant to and used by the end users.

**“Knowledge Users”:**

CIHR defines a knowledge-user as an individual who is likely to be able to use the knowledge generated through research to make informed decisions about health policies, programs and/or practices. A knowledge-user's level of engagement in the research process may vary in intensity and complexity depending on the nature of the research and his/her information needs. A knowledge-user can be, but is not limited to, a practitioner, policy-maker, educator, decision-maker, health care administrator, community leader, or an individual in a health charity, patient group, private sector organization, or media outlet.

**For links to KT tools for researchers, visit:**

<http://www.queensu.ca/ors/researchgrantsanddevelopment/wringwinningproposals.html>

## Appendix

### *Tips:*

- *There is no page limit for the Appendix; Keep in mind, though, that reviewers are not obligated to read appendices*
- *Don't use appendices as an extension of your page limit; remember that your research proposal should stand on its own*
- *Include a cover sheet with a table of contents for appendices (you may also want to include a cover sheet for each appendix to help reviewers find each one)*
- *Label each appendix with the PI name (or it might get lost in the shuffle)*
- *Be sure to label your figures. Figures should not be too complicated.*
- *In general, limit reference list to ~ 100*

### You may attach:

- Reference list (ensure that it contains all literature cited)
- (if applicable): figures, tables, charts, photographs, questionnaires and consent forms, detailed laboratory protocols, description of data sources, detailed project timeline with milestones, study governance structure, etc.
- Letters from Collaborators who are expected to make a significant contribution, confirming their willingness to participate in the manner indicated.
- Letters of support may be appended when specific incremental cash or in-kind contributions are being provided in support of the proposed research. Letters in general support for the research, the researcher or the research team should not be appended and may be removed (unless otherwise directed in the CIHR request for applications)
- Up to five publications from the past five years, relevant to this proposal.

### For New Investigators and for applicants with pending appointment, you MUST attach:

- **Letter of support in the case of a pending appointment from the Dean of the Faculty indicating the date the appointment is expected to take effect.**

**Budget***TIPS:*

- You will not get more funding than you have asked for, so do not underestimate your costs.
- Include every item in the Proposed Budget
- Details about eligible expenses can be found at: [http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions\\_eng.asp#compensation](http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp#compensation), scroll down for CIHR information
- NOTE: In September 2011, the policies and practices of the Tri-Council granting agencies related to the level of stipends that can be paid to students and postdoctoral fellows were harmonized; specific minima or maxima pertaining to stipends paid from grants are no longer in effect.

**Budget Justification***TIPS:*

- **Name the people** involved and the portion of their time spent on the project (who will use what money and how will they use it). If you can provide actual names, this is best.
- List the specific work and responsibilities of all the people (or categories [i.e. PhD, MSc., etc] who will be paid out of the funding (in part or in full)
  - Introduce an HQP notation corresponding to each student you expect to participate over the life of the grant, including current and TBA students (e.g. **[MSc1], [MSc2], [PhD1], [PhD2], [PhD3], [PDF1], [UG1], [UG2], [UG3]**, etc.). This can be exploited in the proposal section to quickly and efficiently show HQP involvement in specific aspects of the proposed work.
  - Consider the use of a Gantt chart (or tables) to show when students will be involved in the program of research or when other major expenditures will take place.
- For **travel expenses**, state who is travelling and for what planned conferences. This is very useful to demonstrate student participation in conferences. Differentiate between travel for research purposes (to field sites, team meetings, etc.) and travel for dissemination purposes (conferences, etc.)
- You must **justify** the need, not simply state what you need.

Use these subheadings (no page limit), which link directly to budget module:

- Research Staff
- Research Trainees
- Materials, Supplies and Services
- Travel

*NOTE: CIHR no longer funds equipment through the open operating grant program. Keep in the mind, though, that an item is considered to be a “material” or “supply” if it meets any one of the following conditions:*

- 1. expendable tangible property; or,*
- 2. useful life of 1 year or less; or,*
- 3. a cost of less than \$2,000.*

*This means that a laptop costing less than \$2000 is considered a ‘supply’ and not ‘equipment’ even though it is a nonexpendable tangible item with a useful life of more than one year. See CIHR definition of equipment at: <http://www.cihr-irsc.gc.ca/e/39922.html>*

## CV

- **Contributions Details - Most Significant Contributions** (max. 1 page)

Identify a maximum of five (5) contributions, with a maximum length of one page, that best highlight your contribution or activities in the field of research, **defining the impact and relevance of each**. A contribution is understood to be a publication, conference, patent or intellectual property right, contract, etc. Your complete description may include the organization, position or activity type and description, from and to dates, and the basis on which this contribution is significant (i.e. relevance, target community and impact).

- **Contributions Details - Activities and Contributions** (max. 1 page)

The activities and contributions defined in this section should include both academic and non-academic achievements, and their impacts.

Examples of entries follow; this is not necessarily a complete list:

- Committee membership
- For peer review committees, specify the year(s), the subject(s), and the funding organization
- For thesis examination committees, indicate the author, title of thesis, and university
- Consulting/contract activities
- Research development
- Research or technical reports
- Supervisory experience (e.g. training of students)
- Technology transfers (specify the nature of the activity and the target audience)
- Involvement in public, private, or non-profit sector activities
- Policy papers
- Presentations as guest speaker (public or invited lectures)
- Editorships (specify if editor-in-chief or member of the editorial team)
- Evaluation of articles for scientific journals (specify title of journal and the number of articles evaluated)
- Knowledge translation/Dissemination activities

If some of these completed works do not seem to support the research theme of the team or centre to which you belong, provide the necessary explanations.

- **Contributions Details - Interruptions and Delays** (max. 1 page)

Identify any administrative responsibilities, family or health reasons, or any other factors that might have delayed or interrupted any of the following: academia, career, scientific research, other research, dissemination of results, training, etc. Common examples of an interruption/delay might be a bereavement period following the death of a loved one, maternity/parental leave, or relocation of your research environment.

Descriptions might include the start and end dates, the impact areas, and the reason(s) or a brief explanation of the absence.

- **Contributions Details - Patents and Intellectual Property Rights** (max. 1 page)

This section should include details for patents and intellectual property rights for technology transfer, products, and services. Do not include publications in this section.

Descriptions might include the title, patents or intellectual property rights number and date, country(ies) of issue, the name of the inventors, and relevance or impact of the stated item.

- **Contributions Details - Publications List** (no page limit)

List your most important publications and other research contributions over the past five years, according to the categories below. This is not necessarily a complete list, and is only intended to provide guidance. Categories can be added as needed. Use only items pertinent to the application. There is no limit to the number of pages you can use.

***Peer-reviewed publications are very important. Ensure that you cite all your publications pertinent to the current application within the past 5 years.***

### **Publication List Categories**

Use each applicable category as a different sub-title; maintain the same presentation order as shown below. In all instances, use the reference format for complete bibliographical notes of each original publication. Indicate the source of funding, if applicable.

- Published refereed papers (original articles published in journals with editorial review)
- Accepted or in press refereed papers (attach acceptance letters)
- Submitted refereed papers
- Published books and monographs (as author or editor)

- Accepted or in press books and monographs
- Submitted books and monographs
- Published contributions to a collective work and book chapters (including chapters written on invitation or collective works derived from conferences or symposiums)
- Accepted or in press contributions to a collective work and book chapters (including chapters written on invitation or collective works derived from conferences or symposiums)
- Presentations as guest speaker (including conferences, presentations, demonstrations, workshops intended for a non-academic audience, according to the type of audience)
- Published abstracts/number of notes (including name of journal, title of article, and date submitted)
- Accepted or in press abstracts/number of notes (including name of journal, title of article, and date submitted)
- Submitted abstracts (including name of journal, title of article, and date submitted)
- Research reports or reports produced for the government
- Articles in professional or cultural journals without review committee (including popularized texts)