GPRC
Research and Innovation

Creating Knowledge

A Guide to Research and Scholarship at GPRC

Direct all questions to GPRC Research and Innovation

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GPRC Research and Innovation is a support office which strives to promote a culture of scholarship at GPRC. We aim to help researchers on our staff achieve funding success and research impact. We can offer assistance with proposal development, funding applications, budgeting and financial reporting, establishing and managing collaborations and partnerships, and facilitating student research.

Our office will help you…

- Strategize and network to create and foster research partnerships
- Find information about awards including deadlines, amounts, and eligibility criteria
- Strengthen your funding proposal
- Find funding support and partnerships for student projects
- Access internal award opportunities

All funding applications, internal or external, require approval by GPRC before they can proceed. Please consult with GPRC Research and Innovation early in your application process to ensure your application is as strong as possible and receives all necessary approvals ahead of the deadline.

What does research at GPRC look like?

Research: an undertaking intended to extend knowledge through disciplined inquiry or systematic investigation.

GPRC is not only a place of teaching; it's also a place of learning. GPRC encourages lifelong learning by all students and employees and celebrates creative and innovative work.

As GPRC moves toward university status, supporting research and other scholarly activities is an increasingly vital part of our mandate. Research can take many different forms. At GPRC we sometimes use the term "scholarship" to encompass the many different types of research and innovative activities in which GPRC faculty, staff and students tend to partake. In 2019, GPRC's mission statement was amended to include a reference to the creation of knowledge:

> ***Creating and*** *connecting knowledge, experience and community one life at a time.*

This small but important change occurred in part to fulfill the Government of Alberta's requirements for degree-granting institutions. The new statement also better reflects the vision of our College to become a leader in scholarship and research, which are the means by which we create knowledge and fulfill our mandate. Supporting faculty scholarship remains a top priority of GPRC as we head toward university status in the coming years. For a brief overview of current faculty scholarship and expertise, please visit our [Faculty Experts](#) webpage.

GPRC's Five Realms of Scholarship

We have embraced a model of scholarship that meets the unique and complex contexts of the College's people, location, history, and mandate. The model incorporates five realms of scholarship: discovery, integration, application, teaching, and practice.

- **Discovery and Creation:** Applied research, scholarly or artistic work, visual art, literature, academic research, invention of new technology.
- **Application:** Application of knowledge to larger social/industrial/economic governance needs; engagement with the broader community for mutual benefit.
- **Integration:** Identifying patterns and trends; synthesizing existing information and ideas for new perspectives; interdisciplinary; cross-trades/professions.
- **Practice:** Increasing personal depth of knowledge and currency in one's own profession/discipline/trade.
- **Teaching and Learning:** The systematic study of teaching and learning to obtain a deeper understanding of pedagogical theory and practice and to inform new practice.

For examples and more information about the five realms of scholarship, click here.

GPRC Signature Research Areas

GPRC supports research in a wide variety of disciplines and specializations. However, we have identified four key areas of research where GPRC has established a strong track record and which will be considered priority areas for development and support:

- **Advanced microbiological diagnostics, ecology, animal health and nutrition** (bee health, antimicrobial resistance, bee husbandry, hygienic microalgae production, forage and feed quality, immunomodulation, animal care and animal use alternatives)
- **Human health, wellness and education** (mental health, high performance sport, health education, youth engagement, substance misuse, public safety, homelessness, clinical processes)
- **Clean technologies, energy and sustainable systems** (automation, control systems, smart construction, solar, geothermal)
- **Rural and Northern Community Enhancement** (business sustainability, Indigenous cultures and communities, public service access, community asset mapping, culture and place making)

Responsible Conduct of Research

GPRC is committed to upholding the highest ethical standards in research. As the College's research support office, GPRC Research and Innovation helps ensure research undertaken by faculty and students is conducted in a responsible and ethical manner. Our policies are in alignment with the requirements of Tri-Council (NSERC, SSHRC and CIHR). Several resources are available to GPRC researchers to help them ensure their compliance to ethical guidelines and standards.

For more information about the responsible conduct of research at GPRC, visit our website.

Identifying and Reporting an Ethics Breach

According to the [Tri-Agency Framework for Responsible Conduct of Research,](#) a breach of research ethics policy can be defined as "the failure to comply with any Agency [or institutional] policy throughout the life cycle of a research project — from application for funding to the conduct of the research and the dissemination of research results."

Examples of an ethics breach could include fabrication or falsification of data or findings; plagiarism, self-plagiarism, or redundant publication; destruction of records; invalid authorship or inadequate acknowledgement; mismanagement of funds in contravention of GPRC or funding agency policy; or failure to report a conflict of interest. Breaches can be intentional or unintentional; even if researchers find themselves in breach of an ethics policy in error, they are still responsible and must take the appropriate rectifying actions.

If you have any concerns regarding a breach of conduct regarding animal care, human subjects, academic integrity or financial matters, please contact Dr. Andrew Dunlop adunlop@gprc.ab.ca or 780-539-2009.

Governing Bodies
- The Research Ethics Board (REB) is GPRC's ethics review body. Ethics review in research is an essential process that protects human participants and animal subjects by minimizing the harms or risks to which they are exposed during research activities. Most research activities involving animal subjects or human participants require ethics review to proceed. Contact the Chair of the REB or [visit our website](#) for questions or concerns before commencing your research. REB-approved research is subject to continuing ethics review throughout the life of the project to ensure that all stages of research are in compliance with the principles of [our governing policies.](#)
    - Please also see the [Application for Ethics Approval for Human Subjects](#) (Also available on the GPRC Assistant: see Academic Policies.
- The Animal Care Committee (ACC) is responsible for overseeing animal use and treatment at GPRC, including animal subject ethics review. For information about ACC processes, contact the ACC Coordinator or visit [the ACC webpage.](#)
- The Research Planning Committee (RPC) meets monthly and is chaired by the Vice-President of Academics and Research. The committee reviews and maintains institutional research policies and procedures and supports a healthy environment for applied research at GPRC. [Visit our website](#) for more information about RPC.

Policies
Researchers should familiarize themselves with all GPRC policies that govern research, innovation and intellectual property:

- [Integrity in Research and Innovation](#)
- [Research Grants and Contracts](#)
- [Research and Ethics Policy Research Involving Humans](#)
- [Animal Care and Animal Usage](#)

- [General Research Fund](#)
- [College Involvement in Commercialization](#)
- [Peer Review Publication](#)
- Intellectual Property (under review)
- Research Data (under review)
- Visiting Scholars (under review)

Developing a Proposal: Tips and Guidelines

Proposal development is one of the most challenging parts of the research process. In this section, we've assembled some advice, tips, and guidelines for developing a strong proposal. Remember that GPRC Research and Innovation will support your proposal development; make sure to consult with our office early in the application process so your proposal will be as strong as possible. Proposals for external funding may not be submitted without the approval of the Director, Research and Innovation and the Vice-President of Academics and Research.

Before You Apply
- **Find the right grant.** Take the extra time to research funding opportunities and consider whether the scope (duration, dollar amount, etc.) of the opportunity and vision of the funder are a match for what you would like to do. Apply only for the grants that are in alignment with your project goals and objectives. [Visit our website](#) for a collection of recent grant funding opportunities.
- **Make sure you meet eligibility criteria.** Most funders establish guidelines around who may receive funding. Check eligibility guidelines thoroughly to make sure you, GPRC, and your project meet all necessary criteria before you invest time into developing a proposal.
- **Establish reasonable timelines.** Check the deadline of the funding opportunity. Is there enough time to develop a thoughtful, well-written proposal? Give yourself as much time as possible for proposal development. If you need letters of support or intend to ask a colleague to review your application, consider leaving yourself at least 30 days so your letter writers and reviewers will not feel under pressure to rush through the task.
- **Identify and approach potential partners or collaborators.** If you hope to collaborate with industry, community, or your colleagues at GPRC or elsewhere on your project, approach them near the beginning of your proposal development. Gauge their interest and willingness to support your project before you apply for funding, and be open to including them throughout the application process.

General Proposal Writing Tips
- Avoid scientific babble or industry jargon. Write for a non-expert audience, using plain English and clear, succinct sentences.
- Check and adhere to the funder's formatting guidelines, or to the ones standard in your discipline in the absence of funder guidelines. Check especially carefully for guidelines relating to page limits, text formatting, and permissible/applicable information.
- Be brief and to the point, as space is usually limited on applications.

- Use all available resources. Consult the Research and Innovation staff and any colleagues who may have insight (past successful funding applicants, people who have served on review boards for funding agencies, etc.). Ask them to review your application and provide constructive feedback if possible.
- Review past successful funding proposals for inspiration.

Keep these key sections in mind as you write:

- *Methodologies.* You will need to propose a strong methodology and be able to explain and justify it. Answer the questions: how does it serve your objectives? Why is it appropriate?
- *Timelines.* Include a comprehensive activity schedule that includes key milestones and expected completion dates for each phase of the research. Make sure your timeline is detailed and realistic.
- *Research Impact.* Be able to identify and explain the key measurable outcomes of your research and articulate the main contributions this research is expected to make to your field of study as well as any potential benefits to community, industry, economy, etc. If you plan to do any knowledge mobilization activities (presentations, publications, etc.), mention them here.
- *Budget.* Make sure your budget is clear, comprehensive, and easy to understand.
  - Consider all expenses, direct and indirect, that your project may incur, including support staff, students, publication fees, knowledge mobilization, maintenance and equipment, faculty release, memberships, travel, administrative support, etc.
  - Avoid underestimating your expenses; err on the side of overestimation. Include quotes and estimates from vendors where possible.
  - Ensure you are able to justify the importance of every item included in your budget.
  - Double check funder guidelines, GPRC policies, and the Tri-Agency Financial Administration Guide to make sure you are not listing any ineligible expenses.
  - For expenses related to personnel, refer to [GPRC collective agreements](#) for salary and benefit expectations. Don't forget to consider costs related to relocation or annual pay increases.
  - Calculate and include the cost of any in-kind contributions (e.g.: hours worked).
  - Include 15% for administrative overhead as required by GPRC policy, unless otherwise specified by the funding agency.

Letters of Support

Some funding opportunities give applicants the opportunity to include letters of support from co-investigators, collaborators, partners, community organizations, and institutions. In letters of support, writers should outline key reasons for their support of the project and acknowledge any financial or in-kind donations they have made or plan to make.

Give your writer plenty of time to complete the letter, be clear about important points you would like included, and provide him/her with a copy of your application and information about the funding opportunity.

Many researchers request letters of support from their institution's executive team. If you are interested in requesting a letter from the Vice-President of Academics and Research at GPRC, contact the Research and Innovation office with your request **at least two weeks in advance of**

the application deadline. If you submit your request with less than two weeks' processing time, internal approval is not guaranteed.

Detecting and Avoiding Predatory Journals and Conferences[1]
Predatory journals and conferences are becoming increasingly common in the publishing landscape. Notwithstanding the financial costs, attending a predatory conference or publishing in a disreputable journal may also cause reputational damage to you and to GPRC.

Knowing the difference between a predatory and a legitimate publisher is not always easy. Below is a resource to help you determine the legitimacy of an academic publisher. If you're ever uncertain, contact GPRC Research and Innovation.

> *Tip:* Be suspicious of unsolicited invitations to publish research or attend conferences. Accept such invitations only from organizations you recognize and trust.

Predatory journals. These "journals" charge high fees to publish but usually lack editorial standards. Contributors to the journal usually pay a fee but do not receive the traditional benefits from publishing (for example, peer review, proofreading, archiving, and marketing).

> *Ask these questions:*

- Does the journal website accurately allude to current trends in your field? Do they use the correct terminology?
- Do articles published in this journal seem polished and well-researched, with no grammatical or spelling errors?
- Does the publisher have a clear, specific mandate? (Examples of vague, "red flag" mandates: "to further innovation and research" or "to facilitate the dissemination of knowledge").
- Do editorial board members have appropriate credentials and up-to-date contact information? Do they work at recognized and respected institutions?
- If you are required to pay a fee to publish, is the fee structure clearly described and itemized? (Note: just because a journal charges a publishing fee does not necessarily mean it is predatory, but journals should be completely transparent about their fee structures.)

Predatory conferences. These conferences are usually poorly organized and lack peer review; sometimes, after collecting registration fees, the conference never happens at all.

Like predatory journals, predatory conferences tend to extend unsolicited invitations via email. The organizer will sometimes host a large number of unrelated conferences at the same date and venue to maximize profits. They are sometimes hosted at popular tourist destinations, and the location rather than the content of the conference is upsold in marketing materials.

> *Ask these questions:*

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[1] This predatory publishing resource was developed with information compiled by the University of Calgary library.

- Does the conference host multiple unrelated events (i.e. someone attending one event would be uninterested in attending any of the others) in the same location on the same day?
- Have any of your colleagues attended this event in the past and spoken well of it? Is it annual/recurring?
- Do you recognize the name of the hosting institution? Is it well-regarded?
- Do you recognize the names and institutions of any of the keynote speakers?

Other Grant Writing Resources
- CIHR Guidebook for New Principal Investigators
- SSHRC – Apply for funds
- SSHRC – Research insights from the knowledge systems, experiences and aspirations of First Nations, Inuit and Métis peoples
- SSHRC – Future Challenge Areas
- NSERC – Grants for colleges
- NSERC – Strategic Plan 2020

Internal Awards: Release Time Stipend

GPRC offers a Release Time Stipend with a value of $12,000 to faculty embarking on long-term research projects that build research capacity at the College. This opportunity offers seed funding and release time to develop a proposal for Tri-Agency (or comparable) external grants. Funds will not be allocated to short-term or discrete projects, and collaborative initiatives will be prioritized. Faculty applying for the Release Time Stipend will receive guidance and support from the Research and Innovation office throughout and beyond their application process.

To apply for the Release Time Stipend, access the form here or contact Research and Innovation for more information.

Internal Award: Student Research Award

GPRC Research and Innovation occasionally offers Student Research Awards, grants intended for students to carry out a long-term applied learning project.

Students who receive the Research Award then initiate and execute their own projects. To help the students achieve their targets, GPRC Research and Innovation pairs the award winner with a faculty mentor, an instructor in the student's field of study who can offer expertise and guidance. If you are interested in acting as a faculty mentor to student researchers, please contact the Research and Innovation office.

One eligible activity for the Student Research Award is acting as a research assistant on a faculty-led initiative. If you are currently engaged in a research project or other scholarly activity and would benefit from student help, contact us to see if we can connect you with an interested student.

Managing Research Funds

While you pursue your project, your research funds will be held in trust for you by the College. For the duration of the project, both you and the College will be accountable to the funding agency for compliance with grant conditions and for accurate, complete financial reporting.

Opening a Research Fund

After you receive your Notice of Award, you will be authorized to open a research fund with GPRC Finance. To access your research fund, you will need to submit to the Research and Innovation office:

- Notice of Award: A letter from the funding agency confirming you as the recipient and indicating the amount and duration of the funding
- A copy of the grant application or research contract
- A comprehensive budget as approved or amended by the funding agency
- A contract cover page

Financial Reporting Responsibilities

Once your fund has been opened, it is up to you to manage your funds responsibly. Researchers' (Principal Investigators') responsibilities with regard to financial reporting and fund management include:

- Saving and archiving all invoices, receipts and proofs of purchase
- Preparing detailed expense reports at the conclusion of every fiscal year (or more often if the funding guidelines call for it)
- Requesting permission from the funder and any collaborators if you must use the funds for an expense not budgeted for in the original proposal
- Personally authorizing and overseeing all expenditures
- Tracking reporting deadlines
- Working with the Research and Innovation Office to complete financial reports.

Project Completion and Follow-up

Data Management

Researchers who receive public funding are required to make their data publicly available (after the data is de-identified and anonymized, if applicable.) Devise a detailed plan for how your data will be stored during and after the research process, how personal data will be protected, and how all relevant information will be made public.

Knowledge Mobilization

Most funding applications will ask you to outline your plan for sharing the findings of your research with the rest of the scientific community and with the public at the conclusion of the study. How you mobilize knowledge will depend on your research question and goals, target audiences, and a number of other situational factors.

Review the following resources for tips and ideas on how to identify the audience for your research findings, mobilize your knowledge in a way that best serves your research goals, and turn your research into real world impacts.

- SSHRC – Guidelines for Effective Knowledge Mobilization
- UBC – Publishing a Journal Article
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Share your research story with GPRC Communications and Marketing
GPRC Communications and Marketing offers a variety of tools to raise the profile of your research within the college and the community. Communications and marketing can…

- Publish articles, blog posts, and success stories about your work on the GPRC website
- Promote your research or findings on GPRC social media platforms
- Add you to our list of GPRC community experts
- Connect you with local media
- Arrange for you to speak at one of our Magpie Series research talks

Researchers are encouraged to connect with communications and marketing at any stage in their work to see where, when, and how sharing successes with the community would be most appropriate and effective.

Email Communications and Marketing: communications@gprc.ab.ca

Collaborator Follow-up
If you have involved partners or collaborators in your research, now is the time to follow up with them. You should stay engaged with partners throughout the research process, but at the conclusion of the study is when it is most important to touch base with them. Too often, this is the step forgotten by researchers.

In your follow-up process, keep the following in mind:

- Share findings with your collaborators before anyone else
- Include partners in knowledge dissemination process
- Invite questions, feedback, and ongoing dialogue
- Ensure your outcomes benefit partners as much as they benefit the researcher

For more information, please see the Peer Review Publication policy.

General Research Fund
If your project received funding from a Tri-Council Agency (CIHR, NSERC, or SSHRC), any unspent funds at the conclusion of your project will be redirected to the GPRC General Research Fund (GRF). This fund is held in trust by the College on behalf of Tri-Council. Funds deposited here can be redistributed to new research projects at the discretion of the College and in compliance with Tri-Council guidelines.

Researchers may apply for GRF funds to cover direct costs incurred in research activities which are not covered by other funding sources (e.g. travel, materials, knowledge mobilization, etc.)

Requests for allocation will include the following:

- Overview statement of the proposed activity,
- Work plan with budget, timeline, and deliverable outcomes; and
- Outcome of a plan to seek and secure sustaining project funds, including details of the funder(s) and program(s) and the likelihood of success.

For more information, see the GRF Policy.

If your project was funded by a source other than a Tri-Council Agency and you have funds remaining at the conclusion of your project, check funder guidelines for instructions on what you should do with residual funding. As the Principal Investigator, you are ultimately responsible for ensuring you are in compliance with funder guidelines regarding financial reporting and project follow-up.