

Natural Sciences and Engineering Research Council  
Discovery Grants | Fall 2023 Competition

**NSERC deadline is November 1, 2023**

## General Information

### Objectives:

The [Discovery Grants Program](#) supports ongoing programs of research (with long-term goals) rather than a single short-term project or collection of projects in the natural sciences and engineering fields. These grants recognize the creativity and innovation that are at the heart of all research advance.

### Award Amounts and Duration:

- No limits are set on amounts requested.
- Discovery Grants are awarded for one to five years, the normal duration being five years.

### Eligibility:

- General rules of NSERC [eligibility](#) apply: you must hold an academic appointment of at least 3 years.
- Researchers can only apply for one Discovery Grant at a time; *team applications are not accepted*.
- Researchers who hold an individual Discovery Grant cannot reapply for another individual Discovery Grant until the last year of their current award, not counting the automatic 1 year extension for Use of Funds.
- The Notification of Intent (NOI) to Apply for a Discovery Grant is now mandatory. Applicants who do not submit an NOI by the deadline of **Tuesday August 2 2023 – 6pm MST** will not be eligible to submit an application in the Fall 2023 competition – please see NSERC's [memo](#).
- Note on Early career researchers
  - Applicants who have an independent academic position for 5 years or less at the time of submitting the notification of intent (appointed on or after July 1, 2018)
  - Five-year window adjusted for any eligible delays in research
  - All eligible leaves taken (e.g., parental, bereavement, illness of applicant or family) will now be credited as twice the amount of time taken
  - ECRs need to self-identify on the Research Portal at the full application stage by completing the Applicant Category module

### General Resources:

- [Program Guidelines](#)
- [Discovery Grant Merit Indicators](#)
- [Presentation and Attachment Standards](#)
- [Application Instructions](#)
- [Instructions for the NSERC Canadian Common CV](#)
- [Discovery Grants Peer Review Manuals](#)
- [Discovery Grants Information Centre](#)
- [Resource Videos](#)

- [NSERC Research Portal](#)
- [Competition Results and Statistics](#)

**Subject Matter Eligibility Resources:**

- [Selecting the Appropriate Granting Agency](#)
- [Addendum to the guidelines for the eligibility of applications related to health](#)

**Contributions to Research and Training:**

- [NSERC's Policy and Guidelines on Contributions to Research and Training](#)

**EDI Resources:**

- [Guide for Applicants: Considering equity, diversity and inclusion in your application](#)
- [NFRF Best practices in EDI in Research](#)
- [CRC's Best Practices Guide for Recruitment, Hiring and Retention](#)
- [Frequently Asked Questions \(2020\) for the Evaluation of HQP Criterion](#)

**Application Deadline to Research Services Office:**

<p><b>Notice of Intent: August 1, 2023 at 6:00 p.m. (MST)</b>  <i>The Notice of Intent is submitted directly to NSERC by the researcher</i></p> <p>Deadline for the <i>optional</i> Detailed Review: October 18<sup>th</sup> at 4:00 p.m.</p> <p><b>Final Internal Deadline: October 27<sup>th</sup> at 12:00 p.m.(noon)</b>  <b>NSERC Deadline: November 1, 2023</b></p>
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***For the full application:***

This competition will be run through Research Management System (RMS).

- Do NOT complete the Research Funding Application Approvals (RFAA) form. Electronic approvals will be completed in RMS. Internal approvals for the full application stage will be done through the RMS system.
- Complete the Pre-Award record in RMS (login at <https://research.ucalgary.ca/rms>) and “Submit for academic approvals” (Under Save & Progress) in good time to allow for approvals from your Department Head and/or ADR prior to the Research Services deadline. Consult your department and faculty for more information on their approval processes and timelines. Ensure you receive all required approvals in advance of **noon on October 27, 2023**.
- Hit “submit” in the Application Overview page in the NSERC Research Portal by noon October 27, 2023 (this sends it to RSO, not NSERC).
- **BOTH the completed RMS approvals record and the NSERC Research Portal application must be received by Research Services by noon, October 27, 2023.**
- If you would like a detailed review, Research Services must receive your complete RMS approvals record and NSERC Research Portal application by **4pm on October 18, 2023**.
  - The detailed administrative review includes checking for eligibility, UofC commitments and risk, compliance with program guidelines, completeness of application, and the opportunity for feedback.
  - The basic administrative review involves a minimal check for eligibility, UofC commitment and risk. Applications received after October 18th will receive a basic administrative review.

## Guide to Applying

To apply, submit an [Application](#), and a [NSERC Common CV](#). Click [here](#) for full instructions.

### Application Overview

#### Application Form

- Identification
- Summary of Proposal
- Proposed Expenditures
- Relationship to Other Research Support
- Highly Qualified Personnel Training Plan
- Past Contributions to Highly Qualified Personnel Training
- Most Significant Contributions
- Additional Information on Contributions
- Activity Details
- Eligibility Profile

#### Free Form Attachments

- Proposal
- Budget Justification
- Other Support Sources (REQUIRED if holding CIHR or SSHRC funding)
- List of References
- Sample of Research Contributions (up to 4 contributions)
- Attestation (Confidential Contributions)

#### Canadian Common CV

#### A. Create an Application

1. Sign in to the [Research Portal](#).
2. Select the Funding Opportunity and click Create.
3. Select your Notification of Intent to Apply (NOI); it will form the basis for your application.
4. Complete your Eligibility Profile and click on Validate.
5. Click on Continue and Create Application.
6. Under Applications, Open the application.
7. Click on Edit to complete the different sections.

*Some fields are pre-populated based on the information provided in your NOI. You may edit these fields as needed.*

#### B. Complete the Application

##### Identification

- Applicant
- Applicant Category
  - Applicants are now required to self-select their [applicant category](#).
- Administering Organization
- Application

- Application Title
- Language of the Application
- Suggested Evaluation Group (not editable)
  - *If the evaluation group is not what you had suggested or if your proposed research program has changed substantially from NOI stage, contact the [NSERC Discovery Grant Program Officer](#)*
- Time to Be Devoted to Research/Activity: hours per month
- Self-identification Statements (optional)
- Supplements/Joint Initiatives (if applicable)
  - Indicate whether you wish to be considered for the:
    - [DND/NSERC Discovery Grant Supplement](#)
      - Indicate the DND Defense and Security Target Area(s) that your research proposal addresses – at least one is required, max 6.
      - *Statement of Relevance: Describe how your research fits within the selected Target Area(s)*
    - [Northern Research Supplement](#) (NRS).
      - Applicants who indicate their interest in the NRS will be given access to the NRS expenditures table, and two new attachments to their NRS budget justification and NRS proposal with list of references.

### **Summary**

- Summary (text box – 3,000 characters)
  - The summary is intended to explain the proposal in language that the public can understand.
  - Indicate why and to whom the research is important, the anticipated outcomes, and how the research field and Canada will benefit.
  - Your proposed research program should not change significantly between submission of your NOI and submission of your full application. If a significant change is required, you should contact the evaluation group program officer as this may affect how your application should be reviewed.
- Second Official Language Translation (text box – 3000 characters)
  - If applicable

### **Proposed Expenditures**

*Before completing this page, read the instructions and consult the [Tri-Agency Financial Administration Guide](#). Note: You are required to validate your “Total amount requested from NSERC” by clicking the “Calculate Totals” button at the bottom of the page.*

- Salaries and benefits
- Equipment or facility
  - *Equipment of any value can be purchased using a Discovery Grant, although the Research Tools and Instruments program is the primary funding program for equipment that costs more than \$7,000*
- Materials and supplies
- Travel
- Dissemination
- Other expenses
- Cash contributions from other sources (if applicable)

### **Relationship to Other Research Support**

- Relationship to other Research Support – Explanation (text box – 12,000 characters)

- This section refers only to other research support that will or may be active within the funding period of the proposed Discovery Grant. Do not include information concerning previous applications or grants that ended or will end before the funding period of the proposed DG. Previously held DGs do not need to be discussed here.
  - Some details on each source of support that you may wish to provide could include: the main objective; a brief outline of the methodology; budget details; and details on the support of HQP
- Other sources of support include grants and contributions from funding agencies, organizations, the private sector, institution start-up funds, research chairs, the primary place of employment (for adjunct professors), and other institutional research support.
- When research funding is held or applied for from **CIHR and/or SSHRC**, you must clearly explain:
  - How the proposed ideas, objectives and expenditures of the Discovery Grant application are entirely distinct from those supported or applied for through CIHR and/or SSHRC.
  - How the anticipated contributions to research resulting from the proposed Discovery Grant will be distinct from those resulting from CIHR and/or SSHRC support.
- In addition, **if you hold or have applied for a CIHR Foundation Grant**, you must clearly explain why the Discovery Grant funds are essential to carry out the research proposed in the Discovery Grant application.
- *The consequence of not providing adequate information to assess the relationship to other research support may be a rating of insufficient for the merit of the proposal.*

#### **Highly Qualified Personnel (HQP) Training Plan**

- HQP Training Plan (text box – 9,000 characters)
  - *The assessment of the HQP Training Plan includes two components, **Training Philosophy and Research Training Plan**. The “Past Contributions to HQP Training” section below allows you to provide information on your training.*
  - Refer to [NSERC’s Policy and Guidelines on the Assessment of Contributions to Research and Training](#) and the [Frequently Asked Questions for the Evaluation of HQP Criterion](#)

#### **Describe:**

- **Training Philosophy** should describe the applicant’s approach to training HQP, detailing the mentoring approach and the type of research training and development opportunities provided.
  - Describe qualitatively any challenges or barriers encountered in ensuring an inclusive research and training environment.
  - Describe the planned approach to promoting participation from a diverse group of HQP, taking into account equity and inclusion in recruitment practices, mentorship approaches and initiatives aimed at ensuring an inclusive research and training environment and trainee growth.
  - Consider these resources: [guide for applicants](#), [EDI: best practices guide for recruitment](#) and [FAQ on the evaluation of training HQP](#)
- **Research Training Plan** should outline how the research program and its anticipated projects are appropriate for HQP training in natural sciences and engineering. Applicants should:
  - Discuss the involvement of trainees in individual projects;
  - Provide details on the planned contributions to training in a co-supervisory or collaborative context, if appropriate;
  - Explain the planned future contributions to knowledge, and the expected training value of the proposed projects; and
  - Provide justification if limited training plans are provided.

- *Applicants are expected to increase the inclusion and advancement of under-represented and disadvantaged groups in the natural sciences and engineering as one way to enhance excellence in research and training.*

### **Past Contributions to Highly Qualified Personnel (HQP) Training**

- Past Contributions to HQP Training (text box – 6,000 characters)
  - *This information was formerly captured in the Form 100.*
  - Clarify your contributions to training of HQP over the **last six (6) years**.
  - The assessment of past contributions to HQP training focuses on the **quality and impact of training**, as demonstrated through three components. Each component should be supported by your CCV and/or application text:
    - **Training environment:** describe the research training and development opportunities provided for HQP (e.g., HQP science outreach and engagement, interdisciplinary research, collaborations, interaction with the private and public sectors). Describe specific actions implemented to support equity and inclusion in recruitment practices, mentorship approaches, and initiatives aimed at ensuring an inclusive research and training environment and trainee growth (if applicable). **Important:** trainee demographic data is not requested, nor required to assess impacts resulting from consideration of equity, diversity and inclusion in the research and training environment.
    - **HQP awards and research contributions:** describe research contributions by HQP (e.g., publications, patents, key presentations) and highlight awards, scholarships and fellowships won by HQP.
    - **Outcomes and skills gained by HQP:** describe your most significant examples of HQP outcomes and explain how your training contributed to their success (e.g., skills and experiences gained, outcomes such as further studies or career). A successful outcome can be broadly defined as any outcome in which the HQP has an impact. This impact can be in natural sciences, engineering, or other fields, but it needs to be clear how the HQP is using the skills gained in the applicant’s research training environment. Cases of HQP delays (e.g. parental or medical leaves) that are beyond your control can be considered. A pattern of prolonged periods of study/frequent student withdrawal from programs should be explained.
  - *Training supported by NSERC ranges from undergraduate theses and summer projects to postdoctoral levels, and includes technical and other research personnel.*

### **Most Significant Contributions to Research**

- Most Significant Contributions to Research (text box – 9,000 characters)
  - *This information was formerly captured in the Form 100.*
  - List up to five (5) of your most significant contributions to research and/or to practical applications over the **last six (6) years**. Contributions made more than six (6) years ago but for which the impact is being felt now (e.g., exploitation of patent, inclusion in a code, etc.) may be included.
  - For each, describe the significance in terms of influence on the direction of thought and activity in the target community and in terms of significance to, and use by, other researchers and end users. For collaborative contributions, describe your role.
  - A contribution does not have to be a single publication or report. For example, a group of publications on a specific subject could be discussed as one contribution.
  - Include the full reference to your contributions or provide the appropriate reference to your NSERC CCV. Applicants are asked to explain and give dates for any significant delays in the research activity or in the dissemination of research results in the NSERC CCV under the section Employment (leaves of absence/delays and their impact on research). Eligible leaves of absence

(e.g., parental leave, medical leave, bereavement, extraordinary administrative duties) are those taken within the last six years. This attachment may also be used to list supplemental contributions to research and to training for a period equivalent to the duration of delays related to COVID-19.

- Applicants who report an eligible leave of absence are entitled to a new attachment used to list supplemental contributions to research and to training beyond the last six years, for a period equivalent to the duration of the leave. Supplemental contributions must be taken from the most recent active research period prior to the last six years.

### **Additional Information on Contributions**

- Additional Information on Contributions (text box – 3,000 characters)
  - Provide details, as appropriate, on the contributions listed in your NSERC CCV. Such details may include:
    - the nature of collaborations with other researchers;
    - the rationale or practice used for: the order of authors in the publications listed, and the inclusion of students in the list of authors;
    - your role in joint publications;
    - the reason for selecting certain venues (journals, conferences) for publications, particular features of the venues, e.g., target audiences, review procedures;
    - the impact or potential impact of patents and technology transfer;
    - the nature of industrially relevant R&D activities;
    - the significance of technical reports;
    - attestation to the nature and the significance of confidential technical and internal reports;
    - original research reported in books or technical reports.
  - You may include other activities or information to help committees to evaluate your contributions to and impact on science and engineering, including interdisciplinary research.

### **Activity Details**

- Certification requirements
  - Indicate if your research will involve human subjects, pluripotent stem cells, animals, or biohazards.
- Environmental Impact
- Research Subject Codes
  - Consult the [Research Subject Codes](#). A primary research subject code is required.
- Area of Application Codes
  - Consult the [Area of Application Codes](#). A primary area of application code is required.
- Keywords
  - Modify, as required, the keywords to best describe your proposal.

### **Eligibility Profile**

- You must re-validate your eligibility profile. Click on Save and validate

### **Formatting Attachments**

*In the Application Overview page, click Upload to attach each required document. Attachments are free-form and must respect NSERC's presentation standards. All text, including references (where applicable), must conform to these standards:*

1. Acronyms and abbreviations must be spelled out completely on initial appearance in text;
2. Pages must be 8 ½" x 11" (216mm x 279mm);
3. Pages must be single-spaced, with no more than six lines of type per inch;

4. All text must be in 12 pt. Times New Roman font;
5. Condensed fonts will not be accepted;
6. Colour imagery is acceptable\* but the text should be in black;
7. All margins must be set at a minimum of ¾" (1.87 cm);
8. Do not introduce hyperlinks or bookmarks in your documents;
9. If you have supporting documents written in a language other than English or French, you are required to provide a certified translation of the document.

### **Proposal (Required attachment)**

- Proposal (maximum of 5 pages)

Addressing the points below, describe the proposed research to be supported. Images and graphics are included in the page limit.

- Recent progress
  - Describe your recent progress in research activities related to the proposal and, in addition for renewals, the progress attributable to your previous DG.
- Objectives
  - Define the short- and long-term objectives of your research program.
- Literature review
  - Discuss the literature pertinent to the proposal, placing the proposed research in the context of the state-of-the-art.
- Methodology
  - Describe the methods and proposed approach, providing sufficient details to allow the reviewers to assess the feasibility of the research activities.
  - The inclusion of sex (biological), gender (socio-cultural) and diversity considerations in research design makes research more ethically sound, rigorous and useful. Describe the rationale for including sex, gender and diversity considerations, and how these aspects will be addressed in the research design, if applicable.
- Impact
  - Explain the anticipated significance of the work.

### **Budget Justification (Required attachment)**

- Budget Justification (maximum of 2 pages)

*Before completing this page, read the instructions and consult the [Tri-Agency Financial Administration Guide](#).*

Provide a detailed explanation and justification for each budget item identified in the Proposed Expenditures page, following the same headings:

- Salaries and benefits
- Equipment or facility
  - *Equipment of any value can be purchased using a Discovery Grant, although the Research Tools and Instruments program is the primary funding program for equipment that costs more than \$7,000*
- Materials and supplies
- Travel
- Dissemination
- Other expenses
- Contributions from other sources (if applicable)

### **Other Support Sources (Attachment)**

- Other Support Sources (file size limit of 10 Mb)

*\* Note that this attachment does not supplant, but is a supplement to, the mandatory Relationship to Other Research Support text box in the application.*



- CIHR or SSHRC summary and budget pages
  - Applicants who currently hold, or have applied for, research support from CIHR or SSHRC **must** provide the summary and budget page of these proposals (these do not need to be reformatted). **Failure to provide these documents will result in an incomplete application.**
  - Do not include information concerning previous applications or grants that ended or will end before the funding period of the proposed DG.

#### **List of References (Attachment)**

- List of References (maximum of 2 pages)
  - Do not refer reviewers to web sites for additional information on your proposal.
  - Do not use hyperlinks in your list of references

#### **Samples of Research Contributions (Attachment)**

- Samples of Research Contributions (up to 4 PDF attachments; file size maximum of 10 Mb/attachment)
  - *The samples of contributions will be used by reviewers to assess the quality of your work. These documents should be chosen to represent your most significant, recent contributions, or those most relevant to the proposed work in the **last six (6) years.***

#### **Attestation - Confidential Contributions (Attachment)**

- If applicable

### **C. Upload your NSERC Common CV**

- In the Application Overview page, click on Upload to link your NSERC CCV to your application. Refer to the NSERC CCV [instructions](#) for details.
  1. Once you have completed the NSERC CCV in the Common CV system, click Submit. When you click Submit, the system will create both a PDF and **confirmation number**. You may retrieve this number at a later time through the History tab on the top menu bar.
  2. Login into the [Research Portal](#) and open your application. This will take you to the Application Overview page.
  3. Within the Canadian Common CV section, click **Attach**. The Common CV Upload page will appear.
  4. Enter your NSERC CCV confirmation number and click **Upload**.
  5. A message will appear indicating that you have successfully uploaded your CCV
- The applicant **must link their NSERC CCV to the application**. Note that the applicant's NSERC CCV can be updated with respect to the version submitted with the NOI, up to the submission of the application.
- Important Note:** Preview your CCV in the Research Portal before submitting your application and ensure that the file has been uploaded correctly. If you are unable to preview your CCV or receive an error message delete your CCV, repeat the steps above and re-upload your CCV.

### **D. Submitting the Application to NSERC**

- Complete the RMS record
  - Complete the Pre-Award record in RMS (login at <https://research.ucalgary.ca/rms>) and submit for academic approvals. Ensure you receive all required approvals in advance of noon on October 27, 2023.
  - The completed RMS record must be received by Research Services by **noon, October 27, 2023**.
- Submit your application to the UofC Research Services Office from the Application Overview page in the Research Portal. The Submit button will be displayed once you have validated all the sections and uploaded your NSERC CCV.
  - If you would like a detailed review, Research Services must receive your complete application by 4pm on October 18, 2023
  - The completed application must be submitted to the NSERC portal by **October 27, 2023 at noon**.

## Review procedures and selection criteria

Applications are submitted to the Discovery Grants program and not to a particular evaluation group (EG). Applications are reviewed by EGs. Each EG comprises Canadian and international peers with diversified expertise in the areas of research covered by the EG. There may also be input on applications from external reviewers. NSERC assigns applications to EGs on the basis of the research topics, the objectives of the proposed research program and input from both applicants and EGs. At the NOI stage, applicants are asked to suggest which EG they believe to be the most appropriate to review their application. The final decision of EG assignment is made by NSERC.







For interdisciplinary research, appropriate review of the application will be ensured by identifying appropriate EG members and external reviewers to review the application. Please see [Guidelines for the preparation and review of applications in interdisciplinary research](#).

Applications are rated according to the following selection criteria. The onus is on applicants to address these explicitly in their application.

- **Scientific or engineering excellence of the researcher** (see [Policy and guidelines on contributions to research and training](#))
  - knowledge, expertise and experience
  - quality of contributions to, and impact on, the proposed and other areas of research in the natural sciences and engineering
  - importance of contributions to, and use by, other researchers and end-users
- **Merit of the proposal**
  - originality and innovation; extent to which the proposal suggests and explores novel or potentially transformative concepts and lines of inquiry
  - significance and expected contributions to research; potential for policy and/or technology related impact
  - clarity and scope of objectives (research program with long-term goals rather than a single short-term project or collection of projects)
  - clarity and appropriateness of methodology
  - feasibility
  - consideration of sex, gender and diversity in the research design, where applicable to the field of research
  - extent to which the scope of the proposal addresses all relevant issues, including the need for varied expertise within or across disciplines
  - appropriateness of, and justification for, the budget
  - demonstration that the Discovery Grant proposal is conceptually distinct from research support held or applied for through CIHR and/or SSHRC
- **Contribution to the training of highly qualified personnel (HQP)** (see [Policy and guidelines on contributions to research and training](#))
  - quality and impact of past training of HQP (e.g., postdoctoral fellows, graduate and undergraduate students, technicians), including
    - training environment provided for HQP
    - HQP awards and research contributions
    - outcomes and skills gained by HQP
  - quality, suitability and clarity of the planned training of HQP, including
    - overall training philosophy
    - research training plan for individual HQP
  - consideration of equity, diversity and inclusion in past and planned training of HQP

The overall merit assessment of each application is based on the combination of ratings by the EG for each selection criterion. The final rating assigned and the applicant category will determine the grant level.

## Resources

- [Discovery Grants information centre](#)
- [Memo to potential applicants](#)
- [Pre-recorded “how to apply” videos](#)
- [List of evaluation groups and research topics](#)
- [Discovery Grants – applicant categories](#)
- [Relationship between NSERC proposals and other sources of funds](#)
- [Peer review manual](#)
-  [Selecting the appropriate federal granting agency](#)
  
- [Discovery Grants – Discovery Accelerator Supplements](#)
- [Discovery Grants – Discovery Launch Supplements](#)
- [Discovery Grants - Northern Research Supplements](#)
- [DND/NSERC Discovery Grant Supplements](#)
  
-  [Discovery Grants merit indicators](#)
-  [FAQ on the evaluation of the HQP criterion](#)
-  [Instructions to external reviewers](#)
-  [NSERC Discovery Grants process for decisions on mandate eligibility](#)
-  [Primary caregivers who are eligible for but decline taking extended leave \(maternity, parental or adoption\) - NSERC Discovery Grant and Discovery Development Grant holders only \(pilot\)](#)