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Overview

The Early Researcher Awards Program (ERA) was established to help institutions and their promising, early career Ontario based researchers build research teams of graduate students, undergraduates, post-doctoral fellows, research associates and technicians.

The ERA is a discretionary, non-entitlement program that encourages applicants from all disciplines to apply. The program award will provide the institution with the funds of up to $100,000 (total over 5 years) for eligible direct costs and up to $40,000 for eligible operating costs. In addition, the award recipient's institution must match an additional $50,000 for eligible direct costs. The funds are to be used over five years.

General Terms

Listed below are some common and helpful terms and definitions:

Applied Research: for the purposes of the ERA program, this definition is based on the Statistics Canada definition of applied research. Applied research refers to the original investigation undertaken to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective. It is undertaken either to determine possible uses for the findings of basic research or to determine new ways of achieving some specific and predetermined objectives[1].

Basic Research: for the purposes of the ERA program, this definition is based on the Statistics Canada definition of basic research. Basic research refers to experimental and theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. It includes pure basic research (i.e., experimental and theoretical work undertaken to acquire new knowledge without looking for long-term benefits other than the advancement of knowledge) and strategic basic research (experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of practical discoveries). It provides the broad base of knowledge necessary for the solution of recognized practical problems[2].

Clinical Trials: refers to a prospective controlled or uncontrolled research study evaluating the effects of one or more health-related interventions assigned to human participants[3]. Clinical trials cannot be the focus of an ERA project. However, a project may contain a clinical trial element that is a natural extension of the discovery research project, and that occurs in the latter stages of the project.

Commercialization: for the purposes of the ERA program, this definition is based on the Centres of Excellence for Commercialization and Research Program definition of commercialization. Commercialization is defined as the spectrum of activities needed to turn knowledge and/or technology into new or improved goods, processes or services that result in positive socio-economic, health and environmental impacts[4].

Contract Research: under a service contract, well-defined work is conducted on a pay-for-service model. A primary goal of a 'service' activity is to apply existing knowledge toward a particular problem or to generate data of limited application. Contract research is not eligible for ERA funding.

Experimental Development: for the purposes of the ERA program, this definition is based on the Statistics Canada definition of experimental development. Experimental development refers to systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products, materials, policies, behaviours or outlooks, or new processes, systems and services or to improving substantially those already produced or processed/installed[5].

Industry Liaison Office: these offices support the research endeavours of university and college inventors by facilitating collaborative research with industry partners and disseminating research results through commercialization. Other public institutions, such as hospitals, may also have industry liaison offices.

Intellectual Property (IP): refers to anything that may be protected by any intellectual property right including, but not limited to, works, performances, discoveries, inventions, trademarks (including trade names and service marks), domain names, industrial designs, trade secrets, data, tools, templates, technology (including software in executable code and source code format), confidential information as applicable, mask work, integrated circuit topographies, documents, or any other information, data, or materials and any expression thereof[6].

Principal Investigator (also referred to as the 'Researcher'): for the purposes of the ERA program, means the researcher who, together with the institution, **submits an application** for financial assistance under the ERA program. This individual is based in or a resident of Ontario and is a full-time faculty or principal investigator who is employed by the institution as the lead carrying out of the project.

Research Team: for the purposes of the ERA program, means, other than the Principal Investigator, those members consisting of one or more undergraduate students, graduate students, post-doctoral fellows, research assistants, research associates and technicians that comprise the research team, provided, however, that each such individual is based in or a resident of Ontario, and employed by the institution to assist the Principal Investigator with carrying out the project.

Application Due Date

- Institutions must submit completed applications by **5pm (EST) on Thursday, December 1, 2022.**
- In preparation for your submitting an application, it is important that you review the details available to you in these program guidelines.

Application Review Process

The ERA application and review process includes the following steps:

1. Institutions must submit completed application packages, including all attachments, by the application due date.
2. Ministry staff review applications for completeness.
3. A Panel of Chairs determines applicants' eligibility.
4. Eligible applications are reviewed by **Peer Review Panel** members.
5. Peer Review Panels make recommendations to the **Ontario Research Fund (ORF) Advisory Board**.
6. ORF Advisory Board makes recommendations to the Minister.
7. **Minister** makes final funding decisions.
8. ERA decisions are communicated to the institution's Vice President of Research or equivalent by letter.
9. Peer Review Panel consensus comments are provided to the institutions to share with the applicants that were not successful.
10. The Ministry will enter into an agreement with the applicant's intuition detailing the terms and conditions for the award once the Minister's decision is made.

Peer Review Panels

The panels are multidisciplinary, and the application will be reviewed by panel members that are within and outside of the applicant's specific field of research. The content and language of the proposal should be clear and understood by people outside of the applicant's field. These panels review all aspects of the proposals. The panel members are searching for clear and concise proposals demonstrating the excellence of the researcher and the quality of the research. In addition, applications must also demonstrate an appropriate development of research talent and a clear outline of impacts and strategic value to Ontario.

The Ministry reserves the right to choose reviewers and assign applications to an appropriate panel.

Ontario Research Fund Advisory Board

The Ontario Research Fund (ORF) Advisory Board reviews the recommendations of the Peer Review Panels and makes a recommendation to the Minister of Colleges and Universities on the portfolio of projects to fund.

Minister Decision

The final funding decision rests with the Minister of Colleges and Universities. The Minister may approve applications, approve subject to terms and conditions, or decline applications at their sole discretion.

The Ministry works directly with the Vice Presidents of Research (VPR) and research office contacts included on the application.

The ERA program is a discretionary, non-entitlement program and funding is awarded on a competitive basis. Decisions are final and there is no appeal of the process, decisions, and decisions regarding the eligibility of the application.

Funding

The ERA program will fund up to a total of $100,000 (over 5 years) for eligible direct costs and up to a total of $40,000 for eligible operating costs, for a maximum of up to $140,000 in funds under the ERA program. The Researcher's (PI) Institution will match an additional $50,000 in funds for eligible direct costs. All funds are to be used over five years.

The Ministry will create an Agreement detailing the terms and conditions for the award once the Minister's decision is made.

Eligibility

Eligible Applicants

The ERA program is open on a competitive basis to researchers who:

1. are **full-time faculty or principal investigators (PI)** who, at the application deadline, are **based at an eligible institution** (adjunct positions do not qualify);
2. have started their independent academic research career on or after **January 1, 2016**; and
3. have completed their first Doctor of Philosophy, Doctor of Veterinary Medicine degree, Medical Doctor or terminal degree on or after **January 1, 2011** (anywhere worldwide).

About eligible interruptions

- Section 9d of the application allows the applicant to provide the panel of chairs and review panel with details on interruptions or delays the researcher (PI) may have experienced during:
    1. The ten years following their first Doctor of Philosophy, Doctor of Veterinary Medicine, Medical Doctor or any Terminal Degree (worldwide);
    2. The five years after starting their independent academic research career.
- The extended eligibility is calculated at 1:1 replacement.
- Some things that are considered ineligible interruptions:
    - Research associate positions
    - Post-doctoral fellowships
    - Time spent in industry (private sector)
- The following interruptions may be considered eligible interruptions:
    - Continued education required training (i.e., medical training and fellowships)
    - Maternity/Parental leave
    - Medical leave

    Example:

    A one-year institution-approved parental leave would extend eligibility by a year during those years.
- All leaves must be institute approved.
- Describe in detail and in chronologic order in section 9d of the application the nature of the delay.

Failure to provide information to support the delay will result in the application being deemed ineligible.

Additional notes for applicants

- Researchers (PI) can only submit one application for the round.
- Researchers (PI) may be awarded only **one** ERA during their career; however, researchers (PI) who are not successful may submit an application in a later competition, providing they continue to meet all eligibility requirements.
- Researchers (PI) who are, or have been, Tier 1 Canada Research Chairs are not eligible to apply for an ERA.
- The Government of Ontario generally defines:
    - an **independent academic research appointment** as a position where a researcher (PI) is capable of independently publishing, supervising, and applying for funding
    - the **first** Doctor of Philosophy, Doctor of Veterinary Medicine degree, Medical Doctor or terminal degree completed anywhere 'worldwide'
    - the **date for which the first** Doctor of Philosophy, Doctor of Veterinary Medicine degree, Medical Doctor or terminal degree – is referring to the 'conferral' date
- To be competitive, researchers (PI) are encouraged to be actively involved in conducting research that has been supported by peer-reviewed funding and to demonstrate academic independence from previous supervisors.

Eligible Institutions

Eligible institutions include the following publicly funded research Institutions:

- Ontario publicly assisted universities
- Ontario colleges of applied arts and technology
- Ontario research hospitals

Other Ontario not-for-profit research institutes may apply to the Ministry for eligibility. All decisions regarding eligibility will be made by the ORF Advisory Board. Institutions seeking eligibility for ERA Round 17 should contact the Ministry for additional information. To allow sufficient time for the Ministry to process the request, applications for eligibility must be received at the Ministry no later than **September 8, 2022**.

A not-for-profit research institution seeking eligibility for ERA funding must demonstrate that:

1. it is not an agency of the federal government, a provincial government, a territorial government, or a for-profit organization;
2. it has the capacity to conduct research; and
3. it does not receive ongoing operating funding from the province.

If you are a researcher (PI) employed at a non-eligible institution and wish to apply, you must hold an academic appointment at an eligible institution and apply through that institution.

Funds contributed by the ERA program for approved projects are disbursed to the applicant's institution. All research supported by the ERA funds must be conducted in Ontario and expended in Ontario at an eligible institution.

To the extent applicable, all costs must adhere to the Broader Public Sector Accountability Act – 2010, including any procurement directives issued thereunder.

Ineligible Institutions/Applicants

The following organizations will not be considered eligible and cannot apply for, or receive, ERA funding:

- for-profit organizations and agencies of for-profit entities
- federal departments, departmental corporations, parent Crown corporations, or wholly-owned subsidiaries of parent Crown corporations

- provincial or territorial departments, agencies, or Crown corporations, as defined in the Government Agency Establishment and Accountability Directive (except for universities, colleges, other educational institutions, or hospitals)
- non-profit corporations that have been established by any of the above

Researchers employed by federal, provincial or territorial government departments or agencies and for-profit organizations are not eligible to apply for ERA funding as Principal Investigators unless they hold an eligible institution academic appointment, in which case, the eligible institution must agree to be the applicant.

Project Expenses

Eligible Expenses

Eligible Expenses shall consist of either Direct Costs or Operating Costs for the Research Team (excluding the Principal Investigator). Amounts specified below:

Revenues	Direct Costs	Operating Costs	Total
ERA Program Funding from the Province	$100,000	$40,000	$140,000
Institution's Matching Contribution	$50,000	-	$50,000
Total	Up to $150,000	Up to $40,000	Up to $190,000

Eligible Direct Costs

The up to $100,000 from the ERA Program Funding from the province and the $50,000 Institution's Matching Contribution will cover the following eligible direct costs for undergraduates, graduate students, post-doctoral fellows, research assistants, associates, and technicians carrying out the research:

- salaries and benefits claimed in proportion to the time spent working on the project.
- essential and reasonable travel and expenses related to conferences, workshops or seminars - not to exceed full economy fares (amount may be limited at the discretion of the Ministry).
- essential and reasonable travel and expenses related directly to offsite research activities - not to exceed full economy fares (amount may be limited at the discretion of the Ministry).
- **associated expenses** (associated expenses are only meant for the research team, not the principal investigator) related to the research team, such as:
  - police record checks
  - job advertisements
  - publication costs
  - accommodations for off-site research
  - lab user fees

  facilities are not eligible associated costs.

Up to **$7,500 for discretionary expenses** to be used to fulfill the objective of the program to build research talent and cannot be utilized to supplement the salary of the principal investigator.

All such eligible direct costs must be managed with a view to economy, practicality and appropriateness.

Undergraduates, graduate students, post-doctoral fellows, research assistants, associates, and technicians must be based in Ontario.

Eligible Direct Costs – Youth Outreach

All project activities are to be free to youth and the general public. Therefore, no registration or admission fees can be charged, and project activities cannot be incorporated into an existing program for which an admission or

registration fee is applied. Up to $1,000 of the eligible direct costs funding can be utilized to supplement the cost of Youth Outreach Activities for eligible expenses, such as:

- the costs of coordinating, developing and delivering youth outreach activities such as speaking opportunities, lecture series, workshops and demonstrations, student competitions and lab mentorships
- consumable lab supplies and the development of working models

Eligible Operating Cost

Operating costs are overhead costs associated with conducting the research project. Applicants can budget up to, but not more than, $40,000 towards these operating costs, in line with the institution's policy on overhead charges.

The province may conduct an audit of the institution in respect of the expenditure of the Funds, the project, or both at any point in time.

Ineligible Expenses

Funds received through this grant cannot be spent on:

- salary, benefits or expenses of the principal investigator (PI)
- the purchase of supplies or equipment
- the operation of equipment and facilities
- salaries or expenses of individuals performing contract research (where the contractor owns the intellectual property)
- visiting fellows
- salaries, benefits or expenses of ineligible team members
- any items or services not directly related to the project

Ineligible Expenses – Youth Outreach

- expenses paid to a third party to coordinate, develop or deliver youth outreach activities
- the development of magazines, books, curriculum documents, courses, marketing materials or multi-media, including new websites
- the purchase of commercially available equipment, such as computers or software, or to stage conferences
- honoraria or salaries for high school student co-operative education or summer high school student positions
- hospitality and catering costs at events

Adjudication Criteria

ERA Evaluation Criteria

Early researcher awards applications will be evaluated based on four weighted criteria; Excellence of the Researcher, Quality of the Research, Development of Research Talent, and Strategic Value to Ontario. The applications will be ranked as exceptional, excellent, very strong, strong, moderate, or insufficient on these four weighted criteria. Below is a summary of the evaluation criteria:

1. Excellence of the Researcher (40%)

- academic and employment record
- research grants and awards received
- publication record
- other areas of research productivity
- researcher (PI) current and potential standing for excellence in the research field based on research plans and the letters of reference
- independence from previous supervisors regarding publication record

- independent peer-reviewed funding

2. Quality of Research (30%)

- excellence of proposed research
- originality of proposed research
- clarity of research proposal
- relevance of methodology

3. Development of Research Talent (20%)

- development of research knowledge of members of the research team
- skills development of team
- training is unique and leading-edge
- experience in HQP training
- clearly demonstrate commitment to Equity, Diversity and Inclusion (EDI) when developing the research teams

4. Strategic Value for Ontario (10%)

Demonstrates potential for strategic value for Ontario and other government priorities, including, **but not limited to:**

- Commercialization benefits
  - commercialization potential
  - likelihood of patent and licensing opportunities
  - knowledge transfer to industry
- Economic benefits
  - improvements to Ontario's productivity and competitiveness
  - creation of jobs
  - sustainable use of natural resources
  - enhancement to Ontario's international reputation as an innovation hub
- Societal and/or cultural benefits
  - improvements to health and well-being of Ontarians
  - improvements to/preservation of environmental quality
  - engagement and mentorship with youth
  - improving public policy
  - placing Ontario at the forefront of a particular research discipline from an international perspective

In all cases, impacts may be short- and/or long-term, but timeframes for achieving impact should be specifically addressed. Applicants are encouraged to document all benefits, particularly to Ontario, associated with their proposal.

Other Project Requirements and Considerations

The following requirements apply to all applicants:

Intellectual Property (IP)

The Ministry does not claim any ownership or rights to any IP resulting from the ERA funded projects. Such rights are to be determined by the lead institution in accordance with its current IP policy. In cases where a consortium of applicants exists, the policy, as dictated in the Inter-Institutional Agreement (IIA) between the consortium members, will dictate the IP policy.

The applicant should describe how ownership and disposition of IP generated from the project will be determined. The Ministry may request a copy of the institutional and/or relevant IP policy.

If applicable, applicants are expected to make mutually agreeable commercialization arrangements with their private sector partners.

Protection of Intellectual Property

Applicants must implement the proper mechanisms for the protection of intellectual property in accordance with Ontario and Canadian legislation, if applicable, including without limitation the execution of nondisclosure and confidentiality agreements by personnel that are directly involved in the project.

Exploitation of Intellectual Property

Applicants shall use their best efforts to ensure intellectual property created or developed through an ERA funded project is exploited in a way that maximizes benefits for Ontario and Ontarians.

IP Resources

The Ministry recognizes the important contribution you are making to the field of practice, as well as the potential commercial value that these ideas hold. Strengthening the ways that Ontarians use intellectual property to support the provincial and local economies is a key priority for our government.

In July 2020, the Ontario government announced the province's first Intellectual Property Action Plan, following the recommendations made by the Expert Panel on Intellectual Property.

The IP Action Plan will drive the province's long-term economic competitiveness by prioritizing the generation, protection, and commercialization of IP. We encourage you to familiarize yourself with Intellectual Property Ontario as well as Ontario's other intellectual property resources, and those available through the Canadian Intellectual Property Office (CIPO).

Youth Engagement and Outreach

Applicants are also required to undertake annual youth outreach activities that primarily target high-school, middle school and elementary school students. These activities can be held virtually should in-person opportunities not be available or feasible. Up to $1,000 of the eligible direct cost funds may be used for the eligible expenses for developing and delivering youth outreach activities, including consumable supplies (e.g., materials for crafts, lab supplies). The matching funds being provided by the institution and/or partner organization may not be used for youth outreach. Activities associated with youth outreach are to be undertaken during each year of the project.

Researchers (PI) can:

- engage youth audiences, as well as educators and the general public, both on-campus and in the community
- expand current outreach activities, or start new initiatives that are free to youth and the public
- partner with other researchers to undertake a broader outreach initiative
- participate in outreach activities operated by other organizations, such as science awareness organizations, provided no fee is charged
- involve undergraduate and graduate students in outreach program design and deliver
- outreach activities can also include speaking opportunities, lecture series, workshops and demonstrations, student competitions and lab mentorship

Equity, Diversity and Inclusion

The Ministry is committed to making equity, diversity and inclusion (EDI) a priority through the integration of EDI principles into ERA funding opportunities.

The Tri-Agency Institutional Programs Secretariat (TIPS), through the Social Sciences and Humanities Research Council (SSHRC), defines equity as the removal of systemic barriers and biases to enact the practice of inclusion so that all individuals have equal access to and can benefit from the program.

To achieve this, TIPS states that institutions must embrace diversity, defined as differences in race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression, and age. Recognizing and valuing diversity and equity must be accompanied by concerted efforts to ensure the inclusion of diverse and underrepresented populations.

The research project should meaningfully engage members of underrepresented groups within the research and development team. Underrepresented groups include, but are not limited to, the four designated groups (women, Indigenous peoples, members of visible minorities, and persons with disabilities). The institution must strive to put in place the right conditions for each individual to reach their full potential.

Please use the [Equity, diversity and inclusion requirements and practices guide](#) provided by TIPS to determine how best to address areas of improvement in your work environment and develop equity, diversity and inclusion action plans[7].

Milestones and Deliverables

Using simple, non-technical language, list major milestones, the significance of these milestones (where appropriate) and the expected project funding year of completion (year 1 through 5).

Milestones will be used to monitor and determine the project's progress against a specific project work plan from the start date of the ERA project through to the project end date.

A milestone is defined as a significant expected event or accomplishment in the life of the project resulting from research activities or a point at which an important change or resolution occurs. Please use brief and succinct statements when describing the justification for the milestone. This may not apply to all milestones. Areas of significance to consider when building milestones include:

- project management
- research capacity building
- research excellence
- achieving research impacts
- training and education
- youth outreach; and
- other significant milestones

Failure to provide milestones and deliverables for the full five years of the project on the application form will result in the application being deemed ineligible and removed from the competition.

Project Budget

It is essential that applicants provide their best forecast of project expenditures and contributions in the budget template. Applicants should pay particular attention to whether their timelines are realistic. The decision to allow a grant extension will be reviewed in the context of the Ministry's fiscal plan and will be reviewed on a case-by-case basis. Applicants should not assume that extensions will be granted.

Please note that the amount requested from ERA is not necessarily the amount that will be received in that year. Projects will be subject to a final holdback amount, and the actual payment will be determined based upon actual project revenue and expenses submitted through the Request for Payment process.

Annual Budget Table

Applicants are required to provide a zero-based budget that details all expenses and revenue sources that will support the operating needs of the proposed project. All 'Totals' will be calculated automatically in the budget table. Amounts should be in Canadian dollars, with no cents.

The budget must be planned out for **the full five years** to qualify for the ERA funding program.

Institutions Matching Contributions must be clearly identified on the five-year budget.

Expenses

Please provide the amount for each category of eligible expenses that are anticipated in each year of the project. The grant can be used for eligible costs, as noted above.

For each proposed team member, identify the position and proposed expenditure each year. If costs are associated with youth outreach, provide the costs for each year. Clearly indicate the requested reimbursement for Direct Costs each year.

Budget breakdown:

- Total Expenditures totaling up to $150,000
- Total Youth Outreach Activities should be no higher than $1,000
- Total Direct Costs totaling up to $100,000
- Total Institute Matching Contribution totaling $50,000
- Total Operating Costs totaling up to $40,000

All costs must be managed with a view to economy, practicality and appropriateness.

Failure to provide a full five-year budget for the project on the application form will result in the application being deemed ineligible and removed from the competition.

Institutions Matching Contributions

The institution is responsible for ensuring that the institutes and private sector matching contribution totaling $50,000 is secured for the applicant **prior to submitting the application** to the Ministry.

Please ensure that:

- Private sector contributions must be in cash
- University scholarships for undergraduates, graduate students and fellowships to post-doctoral fellows on the research team, as well as private or public sector contributions, are eligible

Please keep in mind that the following are ineligible partner contributions:

- Teaching assistantships
- Startup funds from the institution intended to assist newly appointed faculty members launch their research careers
- Awards administered by federal granting councils such as Natural Sciences and Engineering Research Council, Canadian Institutes of Health Research, Social Sciences and Humanities Research Council
- Specific purpose grants received from Ontario government ministries and agencies and funds leveraged by such grants
- Ontario graduate scholarships as part of provincial program funding
- Ontario graduate fellowships as part of provincial program funding

When signing the application form, you are confirming that the applicant has the full amount of matching funds in place on the date the application is submitted. Institutes must be prepared to disclose the source of the institute's matching contribution to the Ministry when requested.

Grant Agreement

When funding for a proposal is approved, the Government of Ontario will enter into an agreement with the applicant's institution on behalf of the Principal Investigator (the 'Researcher'). The institution will sign an agreement with the Government of Ontario detailing the terms and conditions for the award.

The agreement will address terms and conditions for the disbursement of the grant funds that could include, but are not limited to, the following:

- project budget, including the institutes matching contribution
- project start and end dates
- schedule of payments
- milestones, deliverables and performance measures
- contract termination clauses
- monitoring and reporting requirements, including annual progress reporting, financial audits and requests for disbursements and other reports as stipulated

The Ministry will monitor the project in relation to:

- timely submission of annual progress reports, including success stories
- project milestones, deliverables and performance measures
- financial reporting and audits
- youth outreach
- other requirements as set out in the contract

The Ministry, at its discretion and upon reasonable notice, reserves the right to undertake periodic site visits, if applicable.

This program may be subject to change. Grant disbursements are subject to the Ministry having an appropriation approved by the Legislative Assembly of Ontario for the fiscal year in which the disbursement is to be made.

Application Submission Requirements

Application Formatting

Follow the instructions below on how to prepare your application:

- complete each of the sections on the application form
- only include the specific information requested in each of the sections
- only provide information up to the number of pages indicated on the application form, where applicable
- use clear language and avoid technical jargon (technical terms must be internationally understood)
- funding amounts **must** be in Canadian dollars, with no cents
- use the following standard document style:
    - text should be single-spaced, with no more than six lines per inch
    - one-inch margins on all sides
    - where possible, ensure that all pages in attachments are numbered
- Arial 12-point font **must** be used for Appendixes B and C
- appendix B - proposed research **must not** exceed a maximum of six pages, including appendices, excluding references

Do not include:

- any additional letters (i.e., including matching letters)
- information that does not fit within the stated limits
- any additional information after the deadline

Failure to follow the formatting instructions above will result in the application being deemed ineligible and removed from the competition.

Mandatory Attachments to Electronic Application Submission

1. **Proposed Research Proposal**
   (Referred to as Appendix B of the application)

   Must refer to the application formatting instructions above. To ensure readability and fairness of all applications, failure to comply will result in **an ineligible application**.

   - Provide a detailed but concise description of the proposed research.

   - Describe the purpose of the proposed research, outlining your research direction and objectives within the context of the current state of knowledge in the field.

   - Describe your proposed research activities, outlining your plans and methodological approaches.

   - Be prepared to link the research activities described in the proposed research (Appendix B) with the training plans described for the research team (section 12 of the application form).

   - Describe the integration of equity, diversity and inclusion-related considerations in your research design and practices. Explain how you will increase equitable and inclusive participation in your research team.

   - It is imperative that the applicant communicates clearly, for an interdisciplinary audience, how their proposal/ project design meets their ethical obligations and how they have ensured informed consent.

   - Proposed research must not exceed a maximum of six (6) pages, including appendices, excluding references.

2. **Research Productivity and Recognition - Researcher's full Curriculum Vitae (CV)**
   (Referred to as Appendix C of the application)

   Must refer to the application formatting instructions above. Applicants must submit a customized CV formatted in the following order:

   1. personal information
   2. education
   3. recognitions
   4. researcher (PI) profile (briefly highlights the researchers' (PI) skills and work experience relevant to the proposal)
   5. employment history
   6. research funding history
   7. activities
      - student/post-doctoral supervision
      - editorial activities
      - international collaboration
      - committee memberships
   8. contributions (you are only required to complete each category if applicable)
      - presentations
      - interview and media relations
      - publications and citations
      - artistic performances/exhibits
      - intellectual property

   Follow these formatting instructions to prepare your CV:

   - begin with the most recent
   - start each entry on a new line

- list all research contributions, using separate headings to identify peer-reviewed journals, books, conference proceedings, invited lectures and presentations, technical reports, theses, and other publications

- for published contributions, list the full authorship as it appears in the original publication, year, title, name and volume of the publication, and the first and last page numbers

- for publications in the press, indicate the date of acceptance

- for publications submitted, indicate the journal to which they were submitted

- separate submitted from accepted publications. Do not include papers in preparation

- use asterisks to indicate students who are co-authors on the contributions listed

- list any patents indicating which patents are applied for and which are granted

- list any other examples of research productivity

- list other evidence of recognition, such as a prize, or leadership of a committee etc.

- list past trainees and indicate current employment/academic status

3. Three Letters of Reference
   ## (Referred to as Appendix D of the application)

The application package must include **three signed letters of reference**. Letters of reference must be addressed to the institute and sent directly to the research office. The institution will submit a PDF version of the letters to the Ministry along with the corresponding application package.

One letter must come from a non-arm's length relationship. Non-arm's length letters are letters written by a referee who knows the candidate personally (e.g., through mentoring relationships, co-employment relationships in the same school or institute, joint publications, or joint grants).

Examples of non-arm's length relationships:

- Present or past colleague, student, post-doctoral fellow, faculty member, co-practitioner, etc.

- Past mentor

- Collaborator (joint publications, grants, etc.)

Two letters must come from arm's length recommendations. Arm's length letters are defined as those from external referees who are **not** the candidate's dissertation or thesis chair or mentor, the candidate's co-author or collaborator, a family member of the candidate, or a friend of the candidate. External referees may not have a significant relationship with the candidate and must have the ability to write a non-biased letter that speaks to the candidate's background, work and standing in the field. However, it is acceptable for an external referee to be a professional acquaintance. A "professional acquaintance" is defined by circumstances where the candidate and the external referee know each other from a professional society or association or from participating together on a panel, chairing meetings or sharing a similar research interest. The external referee cannot have a personal friendship or family relationship with the candidate or have had a mentoring relationship, co-employment, a former professor, co-author or collaborator, joint publications or joint grants.

Examples of acceptable levels of acquaintance:

- Served on an association committee together

- Met at a conference or chaired a conference or sections of a conference

- Served on a panel together

The following best practices and considerations should be considered when the referee is drafting the reference letter for the applicant:

Best practices for limiting unconscious bias (suggestions for the referee)

- Be accurate, fair, clear and balanced.

- Avoid unduly personal comments.

- Support the points by providing specific examples of accomplishments, if possible.

- Use superlative descriptors (for example, excellent, outstanding) judiciously and support them with evidence.

- Include only information relevant to the ERA program evaluation criteria (Excellence of the Researcher (PI), Quality of the Research, Development of Research Talent, and Strategic Value for Ontario); do not include information related to ethnicity, age, hobbies, marital status, religion, disability status, financial need, etc.

- We encourage the use of inclusive language (for example, "the applicant" or "they" instead of "he" or "she") and free from words or sentences that reflect prejudiced, stereotyped or discriminatory language concerning particular people or groups.

- Letter must be dated and submitted on letterhead.

- Clearly state the full name of the applicant.

- Include the referee's name, position, department, institution, email address and telephone number.

- Include an electronic signature.

- Include a statement from the referee declaring that there is no conflict of interest (if applicable).

- Recommend the letter be written in Arial 12-point font with standard margins and no more than two pages in length.

Reminders

- Referees should have access to the applicant's research proposal and a full CV.

- Reference letters must be dated less than six months from the submission date.

- Referees cannot be affiliated with the nominating institution, faculty or department.

- It is recommended that the arm's length letters be from researchers of international stature familiar with the researcher's (PI) work, where possible.

4. **Mitigating Economic and Geopolitical Risk Checklist
   (Referred to as Attachment A to the application)**

Applicants to the Ontario Research Fund are required to complete the [Mitigating Economic and Geopolitical Risk Checklist](#) and submit it to the Ministry as part of their application.

Institutions should assess applications submitted for funding for potential economic and/or geopolitical risks using existing institutional resources, policies, and processes to help researchers identify and mitigate economic and geopolitical risks. In addition, consider potential controversy or negative views that may result from any existing or planned association with all partners, including private sector partners, that may ultimately impact the reputation of Ontario.

The Mitigating Economic and Geopolitical Risk Checklist is **not** embedded in the application. Please see instructions on how to submit the completed checklist with the application in the Submitting your Application section of the program guidelines.

Failure to attach all the above-mentioned materials through the application submission process will result in the application being deemed ineligible and removed from the competition.

Common Application Errors and Weaknesses

Common errors and weaknesses of applications identified in previous ERA rounds include:

- failure to meet research excellence criterion

- proposed research lacks focus (numerous, unrelated or loosely related projects)

- proposal contains technical jargon, and the content and language are not clear

- failure to confirm that any experimentations will be acceptable on ethical and safety grounds abiding by policies and procedures that govern research integrity

- failure to demonstrate commitment to Equity, Diversity and Inclusion (EDI) when developing the research teams

- failure to "make the case," i.e., to explain the steps that led to the proposed research concept
- failure to keep Appendix B – proposal research to a maximum of six (6) pages, including appendices, excluding references
- failure to demonstrate independence from previous supervisors
- lack of detail in the Highly Qualified Personnel (HQP) plan
- lack of detail regarding the Strategic Value to Ontario
- lack of funds to complete the proposed research and Highly Qualified Personnel (HQP) training
- sustainability is questionable beyond government funding
- failure to attach all the required documents with the submission of the application package
- failure to follow formatting instructions outlined in the guidelines

Submitting your Application

Institutions must undertake the responsibility to ensure applications are submitted electronically to the Ministry no later than **5 pm (EST) on Thursday, December 1, 2022**. Do not send paper copies.

Setting up the storage solution method for application submissions:

- The institution's research office will need to submit an electronic application to the Ministry via your organization's preferred secure cloud storage solution (File Transfer Protocol (FTP), Dropbox, Google Drive, etc.).
- You are responsible for ensuring that the Ministry has access to the preferred secure storage solution method no later than **5 pm on November 24, 2022**.
- Once you have set up the storage solution method from your end, send the necessary information (login and link) or direct access link to ERA@Ontario.ca.
- Ministry staff will access the storage drive and then confirm access has been granted. This step is mandatory and must be completed by the date mentioned above.
- The completed application packages must be uploaded to this secure storage solution on or before the application submission deadline date and time. The research office of the institution is responsible for sending an email confirmation to ERA@Ontario.ca once you have finished uploading your institute's completed application packages.

How to package your application:

The institution's research office must submit the following on or before the application due date.

1. Document 1: a completed electronic application (using the Ministry's ERA application form) including the embedded attachments appendix B, C and D.
2. Document 2: a PDF of the electronic application (as in part 1 above) along with appendix B, C and D saved as one combined PDF document naming the file as follows: INSTITUTENAME_PI LASTNAME_PI FIRSTNAME.
3. Document 3: a PDF of the completed Mitigation Economic and Geopolitical Risk Checklist naming the file as follows: INSTITUTENAME_PI LASTNAME_PI FIRSTNAME_MEGRC.
4. Document 4 (only required if e-signature is not available): a PDF copy of the signature page signed by the Vice-President of Research or any other officer of the institution with authority to bind the institution naming the file as follows: INSTITUTENAME_PI LASTNAME_PI FIRSTNAME_SIGNATURE.

You should compress (zip) all the above-mentioned documents of the application submission together and name the zipped file as follows: INSTITUTENAME_PI LASTNAME_PI FIRSTNAME.

To ensure continuity, consistency and open communication between the applicant and the program, all inquiries/discussions during the application, review and post-award processes are to be coordinated by the lead institution's named contact on the application and Ministry staff.

Failure to follow the above-mentioned instructions **will result** in the application being deemed ineligible and removed from the competition.

Reminders and details of your application package:

- Late or incomplete applications will not be accepted.
- Applications with missing attachments will not be accepted.
- All documents must be sent along with your submission.
- Make sure you have all the following in place:
  - √ A fully completed electronic ERA Application Form, please remember to complete:
    a. your milestones and deliverables listed for the full 5-year term of the project
    b. your full 5-year total expenditure budget
  - √ Embedded in the application form attachment 1: Appendix B - Proposed Research Proposal (maximum of six (6) pages including appendices, excluding references)
  - √ Embedded in the application form attachment 2: Appendix C - Research Productivity and Recognition - Researcher's (PI) full Curriculum Vitae (CV)
  - √ Embedded in the application form attachment 3: Appendix D – Three (3) Letters of Reference
  - √ As a separate file attachment 4: Completed Mitigation Economic and Geopolitical Risk Checklist
  - √ As required, a PDF copy of the signature page signed by the Vice-President of Research or any other officer of the institution with authority to bind the institution, if the institution is unable to provide an e-signature

Ethical, Safety, and Integrity Requirement

Institutions must undertake the responsibility to ensure any experimentation will be acceptable on ethical and safety grounds.

- Research involving human subjects or human stem cells must comply with the Tri-Council Policy Statements: Ethical Conduct for Research Involving Humans (TCPS 22014).
- In the case of laboratory animal experimentation, the institution must comply with the guidelines and policies of the Canadian Council on Animal Care.
- Institutions must ensure that any research involving databases containing personal information adheres to ethical and legal requirements relating to privacy, confidentiality and security of the database information.
- Any research involving biohazards must adhere to the standards outlined in the Public Health Agency of Canada's Laboratory biosafety guidelines.
- Research involving radioactive materials must comply with Canadian Nuclear Safety Commission regulations.
- Institutions must ensure compliance with the Tri-Agency Open Access Policy on Publications.

The Ministry expects researchers and participating research institutions to maintain the highest standards of research integrity. Research institutions are expected to have and abide by policies and procedures that govern research integrity.

Research Involving the First Nations, Inuit and Métis Peoples of Canada

Researchers (PI) who undertake research in partnership with, or research about, the First Nations, Inuit or Métis Peoples of Canada should carefully read TCPS 2 – Chapter 9. The goal of Chapter 9 is to provide guidance to researchers and Research Ethics Boards; it is not meant to override or replace ethical guidance offered by Indigenous peoples themselves.

Security Requirements

- The Government of Ontario is taking active steps to ensure that the benefit of research undertaken in Ontario universities, colleges, academic hospitals and research institutes through its funding programs is safeguarded to protect Ontario's long-term economic security and interests against risks that could result in the loss or misuse of publicly funded knowledge.
- The Ministry has integrated security assessments, developed in partnership with the Ministry of the Solicitor General, into all Ministry research funding programs.

- Applicants are required to complete the Mitigating Economic and Geopolitical Risk Checklist and submit it to the Ministry as part of their application.
- Applicants and institutions should familiarize themselves with the materials and resources developed by the federal government in research security.
- Resources include:
  - [Mitigating economic and/or geopolitical risks in sensitive research projects. A tool for university researchers. December 2019](#).
  - [Geopolitical risk matrix assessment, partnership and best practices checklists developed by the U15](#).
  - [Safeguarding Your Research Checkli](#)st.
- Institutions should assess applications submitted for funding for potential economic and/or geopolitical risks using existing institutional resources, policies, and processes to help researchers identify and mitigate economic and geopolitical risks. In addition, consider potential controversy or negative views that may result from any existing or planned association with all partners, including, private sector partners that may ultimately impact the reputation of Ontario.

Freedom of Information and Protection of Privacy Act (FIPPA)

The Ministry is subject to the Freedom of Information and *Protection of Privacy Act*, R.S.O. 1990 c. F.31, as amended ("FIPPA"). Any information provided to the Ministry in an application to the Ontario Research Fund Program may be subject to disclosure in accordance with the requirements of that Act or other laws.

When submitting an application, applicants may wish to consider clearly labelling or otherwise identifying any information being provided to the Ministry under this application that, in their view, may be considered confidential, commercially sensitive or proprietary information with reference to section 17 of FIPPA.

Applicants are asked not to provide any unsolicited personal information when completing the application form.

Information and documentation provided to the Ministry in the application may be shared with Ministry staff, members of the Ontario Review Panels, external expert reviewers, the ORF Advisory Board and others for the purposes of administering the Ontario Research Fund program.

If you have any questions about the collection and use of your personal information, please contact:
Kevin Dilamarter | Manager, Research Programs
Data, Research and Innovation Division | Ministry of Colleges and Universities
315 Front Street West, 16th Floor, Toronto ON M7A 0B8
Email: Kevin.dilamarter@ontario.ca
Phone: 647-292-7483

Contact Information

To ensure continuity, consistency and open communication between the applicant and the program, all inquiries/ discussions during the application, review and post-award processes are to be coordinated by the lead institution's named contact on the application and Ministry staff.
Should you have an ERA application submission question that is not being addressed please contact us at ERA@Ontario.ca.

References

1. [Statistics Canada](#) - https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/introduction#_Classifying_by_TOA
2. [Statistics Canada](#) - https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/introduction#_Classifying_by_TOA
3. [Glossary of Funding-Related Terms](#) - https://cihr-irsc.gc.ca/e/34190.html#c
4. [Centres of Excellence for Commercialization and Research (CECR)](#)
5. [Statistics Canada](#) - https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/introduction#_Classifying_by_TOA
6. [Report: Intellectual Property in Ontario's Innovation Ecosystem](#) - https://www.ontario.ca/document/report-intellectual-property-in-ontarios-innovation-ecosystem
7. Equity Diversity and Inclusion Requirements and Practices – Tri-Agency Institutional Programs Secretariat (TIPS)

Appendix A: Canadian Research and Development Classifications Codes (CRDC)

The Ministry has implemented the Canadian Research and Development Classification (CRDC), a system that provides a common approach to classifying research across institutions and governments. It was published by Statistics Canada on October 5, 2020.

The CRDC was developed through a collaborative effort by the Canada Foundation for Innovation (CFI), the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council of Canada (SSHRC) and Statistics Canada.

The CRDC includes all current sectors of research in Canada and supports a wide range of needs within the research and development ecosystem. It is modelled after the Australian and New Zealand Standard Research Classification and Frascati Model 2015 (from the Organization for Economic Cooperation and Development) and aligns with international standards.

The three classifications in the Canadian Research and Development Classification (CRDC) are:

1. Type of Activity (TOA)
2. Fields of Research (FOR)
3. Socio-economic Objective (SEO)

When completing your application, please refer to the [CRDC guidelines and classification codes](https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/index), available for download in HTML, CSV, and PDF formats at https://www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/index.

Guidelines for classifying with the CRDC

This section must be completed fully prior to submitting the application to the Ministry.

1. Classifying by type of activity (TOR)

This way of classifying research refers to whether it is basic research, applied research or experimental development.

- The research project should be allocated to a single TOR (basic research, applied research or experimental development). TOA Codes can be found online using the links noted above. You must provide the alphanumeric code as well as the title/name of the TOA in the fields provided on the application form.

     Example:

     Code: RDT2   Division: Applied research

2. Classifying by field of research (FOR)

This way of classifying research includes major classes and related subclasses of research based on disciplines, knowledge sources, objects of interest, methods, processes, and techniques used in research and development activity. This is different from socio-economic objectives, which refer to the purpose or outcome of the research and development activity.

- The research project should be allocated to a single FOR (major class and related subclass). FOR Codes can be found online using the links noted above.
- You must provide the alphanumeric code as well as the title/name of the FOR in the fields provided on the application form.

     Example:

     Level 1 Code: RDF10   Division: Natural Sciences

     Level 2 Code: RDF104   Group: Chemical sciences

     Level 3 Code: RDF10404   Class: Macromolecular and materials chemistry

     Level 4 Code (optional): RDF1040401   Subclass (Field): Characterization of materials

3. Classifying by socio-economic objective (SEO)

This way of classifying research refers to the intended purpose or outcome of the research and development activity. This is different from fields of research, which refer to the disciplines, knowledge sources, objects of interest, methods, processes, and techniques used in the research and development activity in order to achieve objectives.

- The research project should be allocated to a single SEO (major class and related subclass). SEO Codes can be found online using the links noted above.
- You must provide the alphanumeric code as well as the title/name of the SEO in the fields provide on the application form.

  Example:

  Level 1 Code: RDS109   Division: Education

  Level 2 Code: RDS10901   Group: Stages of education