

Early Researcher Awards Program Round 16 Program Guidelines

Note: This guide was for the 2021 / Round 16 competition.

- A new guide for the 2022 / Round 17 competition will be provided by MCU on/before 08-July-2022.
- Please be aware there may be updates for Round 17 which **do not appear** in this document.

Table of Contents

0026E_Guide (2021/03) Page 2 of 17

Overview

The Early Researcher Awards Program (ERA) was established to help institutions and their promising, recently appointed, 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 for eligible direct costs and up to \$40,000 for eligible operating costs. The award recipient's Institution must match an additional \$50,000 for eligible direct costs. The funds are to be used over a period of five years.

General Terms

Listed below are some common and helpful terms and definitions:

Applied Research: refers to original investigation undertaken in order 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.

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.

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. 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 latter stages of the project. Determination of eligibility of a clinical trials portion of a discovery research project will be made on a case-by-case basis and final authority on the matter rests with the Ministry.

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 towards a particular problem or to generate data of limited application. Contract research is not eligible for ERA funding.

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.

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.

Principal Investigator: means the researcher who together with the Institution, submit an application for financial assistance under the ERA program, this individual is based in or a resident of Ontario and employed by the Institution as the PI to lead the carrying out of the Project.

Research Team: 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.

Technology Transfer: is the process of transferring (disseminating) technology from the place where it is developed to wider distribution.

0026E_Guide (2021/03) Page 3 of 17

Technology Transfer Office: sometimes referred to as Technology Licensing Offices, these offices are responsible for technology transfer and other aspects of the commercialization of research that takes place in a university or college. Technology transfer offices act as a liaison between university or college inventors and industry partners. Other public institutions, such as hospitals, may also have technology transfer offices.

Application Due Date

- Institutions must submit completed applications by 5pm (EST) on Friday, June 11, 2021.
- See section on **Application Submission Requirements** for instructions related to preparing and <u>submitting an</u> application.

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 deadline.
- 2. Ministry staff review applications for completeness.
- 3. A Panel of Chairs determine applicants' eligibility.
- 4. Eligible applications are forwarded to a **Peer Review Panel**.
- 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 decisions.
- 8. ERA decisions are communicated to the Vice President of Research and the lead institutional contact of the applicant's institution.
- 9. Peer Review Panel comments are provided to applicants that were not successful.
- 10. The Ministry will create an Agreement detailing the terms and conditions for the award.

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 quality of the research. In addition, applications must also demonstrate an appropriate development of research talent and a clear understanding of how their proposal will impact the strategic value to Ontario.

The Ministry reserves the right to choose reviewers and to 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.

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.

Decisions are communicated to institutions by letter to the institution's Vice President of Research or equivalent and the lead institutional contact.

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.

0026E Guide (2021/03) Page 4 of 17

Funding

The ERA program will fund up to \$100,000 for eligible direct costs and up to \$40,000 for eligible operating costs, for a maximum of \$140,000 in funds under the ERA program. The Researcher's Institution will match an additional \$50,000 in funds for eligible direct costs.

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:

- are full-time faculty or principal investigators (PI) who, at the application deadline, are based at an eligible institution;
- have started their independent academic research career on or after January 1, 2015; and
- have completed their first Doctor of Philosophy, Doctor of Veterinary Medicine degree, Medical Doctor or terminal degree on or after January 1, 2010.

About eligible interruptions:

- Section 9d of the application allows the applicant to provide the review panel with details on interruptions or delays. Failure to provide information will result in the application being deemed ineligible.
 - Research associate positions and post-doctoral fellowships are **not** considered eligible interruptions.
 - Continued education required training (e.g. medical training and fellowships), and parental leave **are** considered eligible interruptions, but must be clearly described in section 9d of the application. Specific dates are required. Failure to provide information will result in the application being deemed ineligible.

Additional notes for applicants:

- Researchers may be awarded only one ERA during their career, however, researchers who are not successful may <u>submit an application</u> in a later competition, providing they continue to meet all eligibility requirements.
- Researchers 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 is capable of independently publishing, supervising, and applying for funding.
- To be competitive, researchers 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
- Not-for-profit research institutions affiliated with an Ontario university or hospital, excluding those funded primarily by business or industry
- Other Ontario not-for-profit research institutions at the discretion of the Ontario Research Fund (ORF) Advisory Board

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

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

0026E_Guide (2021/03) Page 5 of 17

Where an institution's eligibility to apply for ERA funding may be in question, such institution must request and receive confirmation of eligibility from the Ontario Research Fund (ORF) Advisory Board.

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.

Funds contributed by the ERA for approved projects are disbursed to the eligible lead research institution. All research supported by ERA funds must be conducted in Ontario at an eligible institution.

Eligible Expenses

Eligible Expenses shall consist of either Direct Costs or Operating Costs for the Research Team (excluding the Principle 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 related to the research team, such as:
 - · police record checks
 - job advertisements
 - publication costs
 - accommodations for off-site research
 - lab user fees

The associated expenses are only meant for the research team, not the principal investigator. 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.

0026E_Guide (2021/03) Page 6 of 17

The amount paid to graduate students and post-doctoral fellows must be in keeping with the levels established by other award programs. Salaries must be commensurate with institutional remuneration scales.

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.

Ineligible Expenses

Funds received through this grant cannot be spent on:

- salary, benefits or expenses of the principle 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 for Youth Outreach are:

- expenses paid to a third party to coordinate, develop or deliver youth outreach activities
- the development of magazines, books, curriculum documents, courses 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 4 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:

Excellence of the Researcher (40%)

academic and employment record

0026E_Guide (2021/03) Page 7 of 17

- research grants and awards received
- publication record
- other areas of research productivity
- researcher current and potential standing for excellence in the research field based on research plans and letters of reference
- independence from previous supervisor regarding publication record
- independent peer-reviewed funding

Quality of Research (30%)

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

Development of Research Talent (20%)

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

Strategic Value for Ontario (10%)

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

- economic benefits
- knowledge transfer
- ability to enhance the province's profile in the global academic community
- social and/or cultural benefits

Youth Research and Innovation Outreach

Applicants are also required to undertake annual youth outreach activities that primarily target high-school, middle school and elementary school students. Up to \$1,000 of the eligible direct cost's 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' 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; and
- involve undergraduate and graduate students in outreach program design and deliver outreach activities, which
 can also include such initiatives as speaking opportunities, lecture series, workshops and demonstrations,
 student competitions and lab mentorship.

Honoraria or salaries for high school student co-operative education or summer high school student positions are not an eligible Youth Outreach expenses.

0026E_Guide (2021/03) Page 8 of 17

Other Project Requirements and Considerations

Intellectual Property (IP)

The Ministry does not claim any ownership or rights to any IP resulting from 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.

IP Resources

The ministry recognizes the important contribution you are making to your field of practice, as well as the potential commercial value that your 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 <u>Intellectual Property Action Plan</u>, following the recommendations made by the <u>Expert Panel on Intellectual Property</u>.

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 <u>Ontario's intellectual property resources</u>, as well as those available through the <u>Canadian Intellectual Property Office (CIPO)</u>.

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 covenants by employees/students of Applicants.

Exploitation of Intellectual Property

Applicants shall use their best efforts to ensure intellectual property created or developed through ERA funded projects is exploited, including licensing, in a way that maximizes benefits for Ontario.

Equity, Diversity and Inclusion

The Ministry has 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, ethic 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 must meaningfully engage members of underrepresented groups within the research 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 <u>Equity, diversity and inclusion requirements and practices guide</u> provided by TIPS to determine how best to address areas of improvement in your work environment and to develop equity, diversity and inclusion action plans.

0026E Guide (2021/03) Page 9 of 17

Milestones and Deliverables

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

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

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

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.

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.

Expenses

Please provide the amount for each category of eligible expenses that is 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 level, 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 \$150,000
- Total Youth Outreach Activities should be no higher than \$1,000
- Total Direct Costs totaling \$100,000
- Total Institute Matching Contribution totaling \$50,000
- Total Operating Costs totaling \$40,000

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

0026E_Guide (2021/03) Page 10 of 17

Institutions Matching Contributions

The Institution is responsible for ensuring that the institutes matching contribution of \$50,000 is secured for the applicant prior to submitting the proposal to the Ministry. In addition, the institution is responsible for ensuring any private sector contributions to the Institution are in place at the time the award is granted.

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

Institutes must be prepared to disclose the source of the institutes matching contribution to the Ministry.

Grant Agreement

The ERA program will be administered by the Research 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:

- budget, including the institutes matching contribution
- project start and end dates
- · schedule of payments
- · milestones, deliverables and performance measures
- · reports required, including progress and financial reports
- · youth outreach
- · communications
- contract termination clauses

The ERA contract must comply with the guidelines established by the Government of Ontario for the management of public funds.

Application Submission Requirements

Application Formatting

Follow the instructions below on how to prepare your application:

- fill in the templates that are provided in the application form
- only include the specific information requested in each of the sections
- only provide information up to the number of pages indicated in the relevant sections of the application form

· use clear language and avoid technical jargon. All technical terms must be internationally understood

0026E_Guide (2021/03) Page 11 of 17

- · funding amounts should be in Canadian dollars, with no cents
- text must be single-spaced, with no more than six lines per inch
- Arial 12-point font must be used in Appendixes B and C
- margins for Appendix B proposed research must be standard (1" x 1"), nothing else is acceptable
- Appendix B proposed research must not exceed a maximum of five pages, including appendices, excluding references
- · where possible, ensure that all pages in attachments are numbered

Failure to follow the formatting instructions above will result in the application being deemed ineligible.

Do not include:

- any additional letters (including matching letters outside of the templates provided)
- information that does not fit within the stated limits
- any additional information after the deadline

Attachments to Application Form

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

Please PDF the document using the file naming format – PI LASTNAME_ERA_APPENDIX B and include with your application package by the deadline set out above.

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

Applicants must submit a customized CV formatted in the following order:

- 1. personal information
- 2. education
- 3. recognitions
- 4 user profile
- 5. employment history
- 6. research funding history
- 7. activities
 - student/postdoctoral supervision
 - editorial activities
 - international collaboration
 - committee memberships

0026E Guide (2021/03) Page 12 of 17

- 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 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

Please PDF the document using the file naming format – PI LASTNAME_ERA_APPENDIX C and include with your application package by the deadline set out above.

Letters of Reference (referred to as Appendix D of the application)

The application package must include three original signed letters of reference. Letters of reference need to be sent to the institution's research office directly. The institution will submit a scanned version of the letters to the Ministry along with the corresponding application package.

- the letters should address all the ERA Evaluation Criteria: Excellence of the Researcher, Quality of the Research, Development of Research Talent, and Strategic Value for Ontario
- referees should have access to the applicant's research proposal and full CV
- one of the reference letters must be from a former supervisor, mentor, collaborator or corporate sponsor familiar with the researcher
- two of the reference letters **must be from arm's length sources** (i.e. arm's length referees must not have a conflict of interest by having a personal link with the researcher, or by being a colleague, a research collaborator or a corporate sponsor of the researcher)
- it is recommended that the **arm's length letters** be from researchers of **international stature** familiar with the researcher's work
- submit only three reference letters. Any letters from referees not identified on the application form will not be considered by the review panel (see section 18 of the application)

Please PDF all 3 of the scanned original signed letters using the file naming format – PI LASTNAME ERA APPENDIX D and include with your application package by the deadline set out above.

0026E Guide (2021/03) Page 13 of 17

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 is not clear
- 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 five 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
- reference letters are not sufficiently arm's length
- sustainability is questionable beyond government funding
- failure to follow formatting instructions outlined in the guidelines

Submitting your Application

Applications are to be submitted to the Ministry no later than **5pm (EST) on Friday**, **June 11**, **2021**. Paper copies are not required.

Reminders

- Late or incomplete applications will not be accepted.
- · All required documents must be sent along with your submission.
- The application package MUST include all of the following:
 - 1. A completed electronic application (using the ministry's application form) including all attachments
 - 2. A **single PDF** with all the application materials including all attachments name the file as follows: INSTITUTENAME PI LASTNAME PI FIRSTNAME
 - 3. Completed Budget Table within the Application
 - 4 Attachment 1: Appendix B Proposed Research Proposal (maximum of five pages including appendices, excluding references).
 - 5. Attachment 2: Appendix C Research Productivity and Recognition Researcher's full Curriculum Vitae (CV)
 - 6. Attachment 3: Appendix D Three Letters of Reference
 - 7. Completed Mitigation Economic and Geopolitical Risk Checklist within the Application
 - 8. A PDF copy of the signature page signed by the Vice-President of Research or any other officer of the institutions with the authority to bind the institution (electronic signatures or scanned originals are acceptable).

Application Electronic Submission

Electronic applications must be submitted 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 drive prior to the submission deadline date.

Once you have setup the storage solution from your end, send the necessary information (login and link) or direct access link to awards-mri@ontario.ca. Ministry staff will access the storage drive and then confirm access has been granted. This step is mandatory and must be completed before the application submission deadline date.

0026E_Guide (2021/03) Page 14 of 17

The completed application packages must be uploaded to this secure storage solution by or before the application submission deadline date and time. You are responsible for sending an email confirmation to awards-mri@ontario.ca once you have finished uploading your institutes completed application packages.

Ethical, Safety, and Integrity Requirement

Institutions are responsible for ensuring any experimentation will be acceptable on ethical and safety grounds.

- Research involving human subjects or human stem cells must comply with the <u>Tri-Council Policy Statements:</u> <u>Ethical Conduct for Research Involving Humans (TCPS 22014)</u>.
- In the case of laboratory animal experimentation, the institution must comply with the <u>guidelines and policies of</u> 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 <u>Public Health Agency of</u> Canada's Laboratory biosafety guidelines.
- Research involving radioactive materials must comply with <u>Canadian Nuclear Safety Commission regulations</u>.
- 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.

Security Requirements

- The ministry may undertake a review of proposals submitted to the competition to assess potential economic and/or geopolitical risks associated with the project and reserves the right to seek additional information to support the applicant's responses. Results of this review may be shared with members of the review panels and others involved in the adjudication process and may impact funding decisions.
- Institutions should assess proposals submitted for funding for potential economic and/or geopolitical risks using
 existing institutional resources, policies and processes to help researchers identify and manage economic and
 geopolitical risks. In addition, consider any potential controversy or negative views that may result from any
 existing or planned association with private partners that may ultimately impact the reputation of Ontario.
- Further considerations when assessing potential economic and/or geopolitical risks:
 - Could the results of your research be used to support activities in other countries with ethical standards different from Ontario e.g. such as, internal surveillance and repression?
 - Are there any dual-use (both military and non-military) applications to the research being undertaken?
 - Is any of the research likely to be subject to Canadian or other countries' export license controls, particularly Ontario's closest trading partners and allies?
- Additional resources:
 - 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.
- Applicants will be required to complete and submit the **Mitigating Economic and Geopolitical Risk Checklist** as part of the application.

Contact Information

Should you have any questions about the ERA program, please contact us at: awards-mri@ontario.ca.

0026E_Guide (2021/03) Page 15 of 17

Freedom of Information and Protection of Privacy Act (FIPPA)

The ministry is subject to the <u>Freedom of Information and Protection of Privacy Act</u>, R.S.O. 1990 c. F.31. Any information provided to the Ministry in connection with an application to the Ontario Research Fund Program may be subject to disclosure in accordance with the requirements of that Act.

The information and documentation provided to the ministry may be shared with members of the ORF Advisory Board, Ontario Review Panels, and others for the purposes of administering the ERA program.

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.

Appendix A: Canadian Research and Development Classifications Codes

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); and
- 3. Socio-economic Objective (SEO).

When completing your application, please refer to the CRDC guidelines and classification codes, available for download in HTML, CSV, and PDF formats:

- English: www.statcan.gc.ca/eng/subjects/standard/crdc/2020v1/index
- French: www.statcan.gc.ca/fra/sujets/norme/ccrd/2020v1/indice

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 (TOA)

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 provide 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 socioeconomic objectives, which refer to the purpose or outcome of the research and development activity.

0026E_Guide (2021/03) Page 16 of 17

- 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 provide 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 socioeconomic 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

0026E_Guide (2021/03) Page 17 of 17