Description

The Research Team Program is intended to allow teams of qualified investigators to seek funding for research directly related to prion diseases and human neurodegenerative diseases and dementias where the etiology involves protein misfolding and the pathogenesis has prion-like characteristics. Funding is accessible for all relevant fields of inquiry in the themes described below. Funding is intended to encourage collaborations within Alberta and between Alberta investigators and researchers in institutions outside of Alberta. The deadline for submission of applications is **Wednesday, April 19, 2017**.

Research Team grants will be held by at least two Principal Investigators (PI) who are from at least two different research institutions. One Alberta-based PI is to be identified as the nominated Principal Investigator for the Team grant, and funds for the grant will be flowed through the institution of the nominated PI.

Grantees are expected to participate in the training of young investigators, especially graduate students and fellows, and their stipends may be paid from Alberta Prion Research Institute (Prion Institute) grants. Trainees may hold other awards or salary support while receiving stipends from Prion Institute grants.

All usual operating expenses for a research project that are consistent with Tri-Council policy on the use of grant funding (www.nserc.gc.ca) normally will be allowable for grants funded in an Research Team Competition, except for salaries of investigators and overhead. Final decisions on the amount of funding awarded and limitations on specific categories of spending remain with the Prion Institute and will be identified in a Prion Institute award agreement.

The total from partner funders provided to support a Research Team proposal will be a ***cash*** contribution of at least 25% of the total amount contributed by the Prion Institute (at least 20% of total project costs). In-kind contributions are welcome but they are not eligible to be counted against this requirement. The Prion Institute will solely decide on the eligibility of the contribution(s) in terms of meeting this requirement for partner contribution.

The nominated Principal Investigator must provide to the Prion Institute written confirmation from the partner organization that a cash contribution up the amount requested in the application is committed to the proposal. Proof of partner support must be submitted to the Prion Institute within **10 days** of the application deadline. Partner contributions must be external to the nominated Principal Investigator's organization.

The nominated Principal Investigator must provide an undertaking from the partner(s) participants and funders that it will accept the Prion Institute peer review process and Prion Institute decision, on whether or not to fund the designated project. Partner funders and institutions must either transfer funds to the Prion Institute for management or provide an accounting to the Prion Institute of how their funds directed to the grant will be monitored and how the Prion Institute will be advised of their expenditure on the approved project. The Prion Institute will provide its annual scientific and financial reports on the designated project to the partner funding organization(s).

The Prion Institute will provide up to $750,000 for a Research Team Grant over a maximum period of Three years.

Themes accessible for funding:

Prion Diseases

Protein Folding and Misfolding
Pathobiology of Transmissible Spongiform Encephalopathies (TSEs)
Surveillance and Control
TSEs and Society

Prion-like human neurodegenerative diseases and dementias

Protein Folding and Misfolding
Prion-like Mechanisms in Pathobiology

Teams that embody expertise and approaches that include more than one of the themes are especially encouraged.

Application CHECKLIST

Applications must be submitted online through the Alberta Innovates Application website.

The web application has limitations set in numbers of characters: One page on the web form, in 11-point type, is approximately 3,800 characters including spaces.

Applications must contain the following information:

Include a completed checklist in section 6.0 of your proposal

	Section	Web Section #
☐	Project Title (150 characters including spaces)	2.1
☐	Lay Summary (1,900 characters including spaces ~ half page)	2.1
☐	Project Scientific Summary (1,900 characters including spaces ~ half page)	2.1
☐	Research Leader	2.1
☐	Institutional Approvals (Signature page(s), add as appendices)	2.2 / 6.0
☐	Research Plan including identification of relevant theme areas (19,000 characters, including spaces ~ five pages) a Maximum of four pages of appendices for tables, charts or images, to support the Research Plan.	3.1 /6.0
☐	Training component details (3,800 characters including spaces ~ one page)	3.2
☐	Areas of Research (Identify Prion Institute theme area)	3.2
☐	What is innovative about this project? (max 1500 characters including spaces)	3.2
☐	Knowledge Exchange Plans (1,900 characters including spaces ~ half page)	3.3
☐	Deliverables, milestones and schedule (3,800 characters including spaces ~ one page)	3.4
☐	Gantt Chart (add as appendix)	3.4 / 6.0
☐	Impact Plan (3,800 characters including spaces ~ one page)	3.5
☐	Industry Utilization - Commercialization (1,900 characters including spaces ~ half page)	3.6
☐	Project Team: Identify PI and Co-PIs (Max 7,600 characters, including spaces ~ two pages)	3.7 / 6.0
☐	Funding Declaration (http://prioninstitute.ca/content/programs add as appendix)	3.8 / 6.0
☐	Regulatory Approvals (No limit, add as appendices)	3.9 / 6.0
☐	Literature and URLs cited (No limit; may be added as appendices)	3.10 / 6.0
☐	Yearly Budget by Source	4.1
☐	Sources of Funding	4.2
☐	Budget Justification (3,800 characters including spaces ~ one page)	4.3
☐	Budget Spreadsheet (http://prioninstitute.ca/content/programs add as appendix)	4.3 / 6.0
☐	R&D Team Data	5.0
☐	Common CV or NSERC Form 100 for all team members (No limit, add as appendices)	6.0
☐	Document Attachments Checklist	6.0

Elements of a Full Application

Lay Summary

The lay summary should be brief and provide in non-scientific terms what problem this research is addressing and how the problem is being approached in this project. (Lay readers will adjudicate this summary before it will be allowed to proceed to scientific peer review.)

If the proposal is successful, the lay summary might be used for distribution to the public through media releases or other means.

Project Scientific Summary

The scientific summary should be brief and provide in scientific terms what problem this research is addressing and how the problem is being approached in this project.

Scientific Characters

- The online applications software will reformat text that uses subscripts, superscripts, bold and italic formats to regular text.
- If a section in a proposal requires specialized formatting of text (bold, italic, subscript and superscript), tables or images, you may add the section as a Word document or PDF in the appendices (Section 6 – Document Attachments) of the proposal.
- If appending a scientific summary, tables or images, please indicate in the Project Scientific Summary if you have appended a document, for example: "*See attached scientific summary in Section 6", or "Refer to attached table in Section 6".*
- The character count and all other conditions in the appended section must conform to the proposal requirements.

Research Team Leader

Only one principal investigator will be responsible for the administration and reporting on the progress of a proposal. Other arrangements among participating researchers may also be made within a project and should be noted in the proposal.

Institutional Approvals

Signatures approving the proposal must be obtained from the host institution by the applicant.
A PDF of the signed approval form(s) must be attached to Section 6. Document Attachments.

Applicants funded in this competition may be required to provide the Prion Institute with the original signed signature form(s) if the proposal is funded.

Applications originating from:

The University of Alberta: Use the **Research Services Signature Page.** http://www.rso.ualberta.ca/Applying/ApplicationsProposals/Signatures.aspx

The University of Calgary: use the **Research Services Office, Research Funding Application** at http://www.ucalgary.ca/research/files/research/rfaa-template.pdf

The University of Lethbridge: use the "Research Proposal Form" available from the UofL online portal.

All Other Applicants: **use the** PDF form found at the top of the "Preview" screen in the online application form, **"Signatures and Employer's Approval" form.**

To obtain signatures from Co-Investigator. Co-Investigators are not required to obtain signatures from their supervisor(s) use the **"Signatures and Employer's Approval"** PDF found at the top of the Preview screen,

For the purpose of completing the Signature Approval Forms, enter a project start date that is no earlier than July 1, 2017 and an end date that corresponds to the duration of the proposal.

Where applicable, applicants should obtain evidence of support from collaborators in the form of a ***letter of support*** from the individual, group, agency or industry collaborator(s). Attach letters of support to section 6; "Document Attachments" in the application form.

Research Plan

Provide a description of the research to be undertaken. This should include a framework for the research, questions to be addressed, methods and approaches to be used, use of collaborative approaches, and anticipated outcomes. The description must outline how the team members will contribute to the expected deliverables and how they will interact with one another. The description should clearly demonstrate how the project will further the objectives of one or more of the Prion Institute's theme areas.

Particular attention should be given to a description of the planned national and international collaboration that will allow the research team to access expertise, facilities and materials relevant to prion and prion-like protein misfolding research.

The Research Plan should be brief and provide in scientific terms what problem this research is addressing and how the problem is being approached in this project.

**** *NEW* ** - Applicants must provide sample size and power calculations to indicate how reliable conclusions will be made.**

Applicants may append a **maximum four (4) pages** for this section of the proposal for tables, charts or images to include as a part of your proposal. Figures and diagram must be of sufficient size to be easily legible.

Scientific Characters

- The online applications software will reformat text that uses subscripts, superscripts, bold and italic formats to regular text.
- If a section in a proposal requires specialized formatting of text (bold, italic, subscript and superscript), tables or images, you may add the section as a Word document or PDF in the appendices (Section 6 – Document Attachments) of the proposal.
- If appending a scientific summary, tables or images, please indicate in the Project Scientific Summary if you have appended a document, for example: "*See attached scientific summary in Section 6", or "Refer to attached table in Section 6".*
- The character count and all other conditions in the appended section must conform to the proposal requirements.

Training Component

Discuss how the research group will address the need for highly qualified people in prion and protein misfolding research within Alberta. Provide details of how trainees will be prepared for further research in the area, and how training will incorporate exposure to different laboratories and techniques, as well as other experiences such as science communication to various audiences, grant crafting, and grant management.

Particular attention should be given to a description of how the planned training program will provide trainees with access to experts, facilities and training at state-of-the-art research environments in prion and protein misfolding research nationally and internationally.

Applicants must provide details of the history of training and outcomes for previous trainees.

Areas of Research

Identify one of the Prion Institute theme areas the proposal will address. If the proposal addresses more than one theme, identify the theme that is **most significant** first:

Protein folding and misfolding
Applying tools of structural biology, biophysics, biochemistry, molecular biology and bio-computing to understand the mechanisms of BSE, TSEs and other diseases of protein misfolding.

Pathobiology of TSEs
Understanding BSE/TSE biology susceptibility, transmissibility and disease progression using genomics, proteomics, metabolomics and other innovative approaches that will contribute to the diagnosis, prevention, cure, and possible elimination of the diseases.

Surveillance and Control
Minimizing risks associated with prion exposure, including disposal of specified risk material, technologies for inactivation and decontamination of prions in water, wastewater, soil and the environment.

Also focused on diagnosing BSE based on prion genomics, focusing on immunologic and biomedical engineering technologies to apply, validate and improve antemortem tests developed elsewhere and to explore opportunities for new tests to be developed in Alberta.

TSEs and Society
Studying policy and response modeling, assessing economic and sociological components of community impact, risk perceptions, consumer acceptance and impact on markets, and ensuring fair and accurate communication of scientific advances. This component will also provide information useful to all levels of government for the development of public policies regarding TSEs.

What is innovative about this project

What is novel, innovative or unique about this proposal? Describe what new idea, method, or device this proposal will develop to further an existing need or advancement of a new technology.

Knowledge Exchange

Publications are a necessary but insufficient output from a Prion Institute grant. Describe plans for exchanging knowledge including a description of partnerships with the public and private sectors. The Prion Institute strongly encourages involvement of potential end users of research findings at all stages of grant application and performance.

The absence of a good knowledge exchange plan will be a significant drawback to your application.

Deliverables, Milestones, and Schedule

Identify the expected deliverables, milestones and provide a schedule of the project. Attach a **Gantt chart** in Section 6 'Document Attachments'**.** Gantt charts should indicate intervals of six months at the least. Refer to https://en.wikipedia.org/wiki/Gantt_chart for a description of a Gantt chart.

Impact Plan

Describe how your project will engage; policy makers, government, industry, and approach publishing and patenting.

At what stage in your research will you approach these entities?

Industry Utilization - Commercialization Plans

Describe the strategy for management and protection of intellectual property (IP), as well as the plans for handling of any new intellectual property that may arise as the result of Prion Institute sponsored research. Teams must provide a signed agreement between team members and their institutions outlining the agreed principles of sharing of IP ownership before an award will be activated. The Prion Institute and AI Bio do not wish to take any ownership of IP.

Project Team

Designate the Nominated PI responsible for the administration of the grant, and provide a description of the research experience and background of proposed investigators involved with the project, including the nature and extent of the collaboration between investigators. Provide a common CV or an NSERC Form 100 for each principal and co-investigator in an appendix.

Only one "nominated Principal Investigator" will be responsible for the administration and reporting on the progress of a proposal. Other arrangements among participating researchers may also be made within a project and should be noted in the proposal.

Funding Declaration

Complete the table 'Funding Declaration 2017 Prion Institute Team Program, Round V', available from the Prion Institute website; http://prioninstitute.ca/content/programs. Identify the past five years of funding and proposals under review for the Principal Investigator. Append the Funding Declaration table in Section 6.0.

Regulatory Approvals

Where applicable, in the appendices (Section 6.0), provide certificates and approvals to carry out the research (example Animal Care Certificate and Human Ethics approval).

Literature Cited

Provide complete reference information to all literature cited throughout the proposal (No limit, may add as appendices)

Detailed Budget and Justification

A Research Team Grant can be for up to $750,000 from the Prion Institute for up to three years.

Budgets must be carefully documented and justified. Prion Institute funds may be used for stipends for trainees, research operating costs, equipment, costs related to national and international collaborations, allowable travel costs, and other reasonable expenditures as required to carry out the project. Compensation for investigators and overhead costs are not allowable expenses.

Identify the source(s) of the partner funding, and provide an undertaking that funding of at least 25% of the amount provided by the Prion Institute will be contributed to the project from other sources. Also, provide an undertaking from the partner(s) participants and funders that it will accept the Prion Institute peer review process and the Prion Institute decision, on whether or not to fund the designated project. Partner funders and institutions must either transfer funds to the Prion Institute for management or provide an accounting to the Prion Institute of how their funds directed to the grant will be monitored and how the Prion Institute will be advised of their expenditure on the approved project. The Prion Institute will provide its annual scientific and financial reports on the designated project to the partner funding organization(s).

Project expenses must be consistent with the Tri-Council policy on the use of research grant funding, which is available at www.nserc.gc.ca. . Costs for compensation of investigators and for overhead are not allowed.

Complete the spreadsheet 'Budget Spreadsheet 2017 Prion Institute Research Team Program, Round V', available from the Prion Institute website; http://prioninstitute.ca/content/programs. Append the Budget Spreadsheet in Section 6.0.

Attach final documents only. If you attach a document in error, the document can be deleted or removed.

Proposal attachments must be provided in the following order:

1. **Research Plan** - Append this section to the proposal **if** scientific nomenclature, text (bold, italic, subscript and superscript).

    a. Applicants may append a **maximum four (4) pages** for this section of the proposal for tables, charts or images to include as a part of your proposal. Figures and diagram must be of sufficient size to be easily legible.

2. **Gantt Chart** - Refer to https://en.wikipedia.org/wiki/Gantt_chart for a description of a Gantt chart.

3. **Funding Declaration Table** - Complete the Excel table 'Prion Institute Research Team Program, Round V Funding Declaration 2017', available from the Prion Institute website; http://prioninstitute.ca/content/programs.

4. **Budget Spreadsheet** - Complete the Excel spreadsheet 'Budget Spreadsheet 2017 Prion Institute Research Team Program, Round V', available from the Prion Institute website; http://prioninstitute.ca/content/programs

5. **Curriculum Vitae of Nominated Principal Investigator and Project Team Members**

6. **Publications and patents, other evidence of productivity.**

7. **Regulatory Approvals forms** where available (examples; ethics approval, animal care certificate)

8. **Other attachments/Letters of Support**

9. **Institutional approval forms** where available (examples; signature pages, ethics, animal care approval)

10. **Research Team Program, Round V Guidelines - Application Checklist** (page 3 of the Guidelines) indicating all items in the application have been completed.

Important Dates

Application Deadline Date	**Wednesday, April 19, 2017**
Announcement of Results	June/July 2017

Submission of Application

Application forms are to be completed and submitted through the **Alberta Innovates Application website** listed under the *Research Team Program, Round V Competition*.

Review Process

A Review Panel consisting of members from the Alberta Prion Research Institute's International Research Advisory Council (IRAC) will review applications in conjunction with appropriate external peer reviewers from the international community. Decisions on funding will be made by the Prion Institute after consideration of the Review Panel recommendations.

> **Applicants may suggest a list** of up to three Canadian and/or foreign reviewers that you feel have the expertise to review your application. The Prion Institute reserves the right to make the final selection of external reviewers.
>
> 1. You should not suggest reviewers who are in conflict of interest with your proposal.
>
> 2. Forward your list of suggested reviewers to Ron Clarkson by email at ron.clarkson@albertainnovates.ca. Identify your proposal by the proposal number and project title.

Terms

Funding will be for up to three years. Final approval and initiation of funding will not occur until the Prion Institute is formally advised in writing of the commitment to funding by the other funding partner(s).

Evaluation of Research Team Program, Round V Competition will be based on:

- Demonstrated contributions to the desired outcomes of the Prion Institute
- The quality of the research
- The quality of the participating investigators and trainees
- Success in attracting funding from other sources
- Proposed commercialization of inventions and research results
- Experience in and plans for knowledge exchange

Monitoring

Funding recipients are required to provide annual reports on all projects using Prion Institute report forms. The Alberta Prion Research Institute must be notified of and approve significant changes to the project plan. Alberta Innovates, as parent agency of the Alberta Prion Research Institute, reserves the right to call for a formal review and to terminate the project if progress appears to be less than satisfactory.

Reporting

Alberta Innovates and the Alberta Prion Research Institute are committed to demonstrating results to Albertans for the money invested in research, so processes for monitoring progress and appropriate use of funds, as well as for performance measurement, reporting, and program evaluation will be in

place. Funding recipients must adhere to the Prion Institute's reporting requirements and provide requested information in a timely fashion. They must contribute to the monitoring, review and evaluation of the Prion Institute's programs by participating in evaluation studies, program review and audits and provide data or reports as required for the purpose of collecting information to assess progress and results. They must also encourage their associates, trainees and administration to participate in the monitoring of the Prion Institute's programs, policies and processes as required.

Projects supported in the Research Team Competition are required to report annually using the Prion Institute's reporting forms.

Grant recipients must file copies of all publications with the Prion Institute and must report on all knowledge exchange activities with stakeholders within a maximum of three months of publication or of the knowledge exchange activity having taken place.

Continuation of grants will be dependent upon adherence to Prion Institute conditions and subject to timely submission of reports and assessment of satisfactory progress as judged by scientific review.

Communications

Funding recipients are required to acknowledge the Alberta Prion Research Institute and Alberta Innovates, as well as other sources of funding in any communication or publication related to the project. Funding recipients are expected to participate in outreach activities of the Prion Institute and Alberta Innovates that communicate the benefits of the research program to Albertans and beyond. The Prion Institute expects advance notification of public release of information concerning results from projects that it supports. For further details please contact the Communications Manager of the Alberta Prion Research Institute.

Freedom of Information and Protection of Privacy Act

As a public body, Alberta Innovates is regulated by the Freedom of Information and Protection of Privacy Act of Alberta. Information provided by applicants is for the use of the Prion Institute and Alberta Innovates, except as required by the Act, and those involved in the grant application review process and organizations that partner with the Prion Institute in funding programs. It is a condition of award that the Lay Summary and a Prion Institute-developed summary of the research may be published at any time at the Prion Institute's discretion.

Contact Information

For questions on Alberta Prion Research Institute grant program guidelines, application information and the peer review process, contact:

Ron Clarkson
Director, Prion Programs
Alberta Prion Research Institute
Phone: (780) 638-3788
Fax: (780) 643-1432
Email: ron.clarkson@albertainnovates.ca