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Barbara Turnbull Foundation  
for spinal cord research  
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## Barbara Turnbull Foundation for Spinal Cord Research - Brain Canada Foundation

### Turnbull-Tator Award in Spinal Cord Injury and Concussion Research 2022 Request for Applications (RFA)

#### **About the Barbara Turnbull Foundation for Spinal Cord Research**

The initial purpose of this Foundation was to encourage the public to recognize and financially support internationally esteemed research being done in Canada in the field of neuroscience, particularly as it relates to the remediation of spinal cord injuries. More recently, the Foundation has expanded its area of interest to include both spinal cord and brain injuries, including concussions. Great advances have been made in neuroscience, and the driving force that encouraged Barbara Turnbull to write her autobiography “Looking in the Mirror” was the realization that these advances may make the goal of regaining function in the damaged nervous system attainable. Through further research, there is the possibility of new discoveries which may result in repair or regeneration of the spinal cord and brain after injury. Successful remediation will greatly improve the quality of life of those who have been affected by neurotrauma, as well as reduce the ongoing costs of providing related care and support.

Based on a synergistic approach that recognizes excellence in collaborative research in Canada in the field of neuroscience, the mission of this Foundation is to enhance public awareness of the need to financially support this vision, to develop strategic co-operative initiatives with other institutions and foundations with similar interest such as Brain Canada, and to fund the highest quality research in spinal cord and brain injury which is being done in Canada.

#### **About Brain Canada Foundation**

Brain Canada Foundation (Brain Canada) is a national registered charity that enables and supports excellent, innovative, paradigm-changing brain research in Canada. For more than two decades, Brain Canada has made the case for the brain as a single, complex system with commonalities across the range of neurological disorders, mental illnesses and addictions, and brain and spinal cord injuries. Looking at the brain as one system has underscored the need for increased collaboration across disciplines and institutions, and to ensure that Canada has a robust pipeline of talent to remain at the forefront in the field of brain research. Brain Canada’s vision is to understand the brain, in health and illness, to improve lives, and achieve societal impact.

The Canada Brain Research Fund (CBRF) is an innovative arrangement between the Government of Canada, through Health Canada, and Brain Canada Foundation, designed to encourage Canadians to increase their support of brain research, and maximize the impact and efficiency of those investments. The Fund supports the very best Canadian neuroscience, fostering collaborative research and accelerating the pace of discovery, in order to improve the health and quality of life of Canadians who suffer from brain disorders. To date, Health Canada has invested over \$130 million through the CBRF which has been matched by Brain Canada Foundation and its donors and partners.

[www.braincanada.ca](http://www.braincanada.ca)

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## Rationale

The Turnbull-Tator Award was originally established in 2001 in honour of Barbara Turnbull, known as the Barbara Turnbull Award, in recognition of the work that Barbara had done to raise awareness about spinal cord injuries and her advocacy for excellence in research done in Canada in this field. From 2001 to 2015, the annual Barbara Turnbull Award was supported through a partnership between the Barbara Turnbull Foundation for Spinal Cord Research, Brain Canada, and the Institute of Neurosciences, Mental Health and Addiction (INMHA) of the Canadian Institutes of Health Research (CIHR). This prestigious award was presented to the top-ranked spinal cord researcher identified through CIHR's investigator-initiated grants competition.

In 1983, Barbara sustained an extremely severe injury when she was shot during a robbery, which caused quadriplegia. Undeterred, she pursued a career in journalism while striving to encourage and support research in Canada into the basic science of neurotrauma. In addition, she tried to improve rehabilitation and access to care for people living with the effects of major trauma to the nervous system. In July 2015, Barbara Turnbull was appointed as a Member of the Order of Canada in recognition of her contributions to the betterment of this country.

In continuation of the partnership formed in 2001, the Barbara Turnbull Foundation for Spinal Cord Research and Brain Canada partnered once again in 2019 to expand the scope of the Award to include traumatic brain injury and concussion research as well as reposition the award to recognize a recent publication that significantly impacts those fields. Accordingly, the name of the Award was changed to reflect the very close relationship and sense of common purpose between Barbara Turnbull and her neurosurgeon, Dr. Charles Tator, a dear friend, mentor, and colleague.

Dr. Tator was Chair of the neurosurgery division at the University of Toronto from 1989 to 1999 during which his primary research focus was spinal cord injury and its remediation. He formerly held the Campeau-Tator Research Chair at the University of Toronto. In addition to studying the acute management of spinal cord and traumatic brain injuries, Dr. Tator currently focuses on the concussion spectrum of disorders, a subject on which he has spoken publicly and extensively. Dr. Tator is the Project Director of the Canadian Concussion Centre at the Krembil Brain Institute, Toronto Western Hospital. Dr. Tator has been a strong advocate for public education about injury prevention, especially in sports and recreation. In 1992, he founded Think First Canada/Penser d'Abord, an injury prevention foundation, and served as its president until 2007. In 2013, he published a paper entitled "Concussions and their consequences: current diagnosis, management and prevention" in the *Canadian Medical Association Journal* (CMAJ 185(11):975-9, 2013). Dr. Tator was appointed as a Member of the Order of Canada in 2000. He was promoted within the order, to Officer of the Order of Canada in 2017. Dr. Tator was named to the Canadian Medical Hall of Fame in 2009. He was inducted into the Terry Fox Hall of Fame in 2003, and Canada's Sports Hall of Fame in 2017 for his work on the prevention of brain and spinal injuries in sports.

Barbara Turnbull and Dr. Charles Tator were aligned in various efforts to promote awareness of the impact of spinal cord injury and its prevention, research into its treatment, and a better understanding of the nature, diagnosis, and treatment of concussion and traumatic brain injury. Both brain and spinal cord injuries have a significant impact on productivity, health, quality of life and well-being of affected individuals. Research is a catalyst for discoveries that can improve the lives of those impacted by neurotrauma.

## Award Details

This award aims to recognize an outstanding publication by a researcher at a Canadian institution in the field of spinal cord and/or brain injury research, including concussion, in the last two years (October 1, 2020 to September 30, 2022) with a \$50,000 prize. The Brain Canada Foundation, through the Canada Brain Research Fund, and the Barbara Turnbull Foundation for Spinal Cord Research will each contribute \$25,000.

Recognizing the important need to build capacity in these fields, this year, the funds awarded through the 2022 Turnbull-Tator Award will be utilized to support the salary / stipend of full-time graduate student(s) (M.Sc., Ph.D.) or postdoctoral fellow(s) conducting research in the recipient's laboratory and contributing to the continuation of the excellent research exemplified by the awarded publication.

## Scope

The publication can address any aspect of the two research areas, spanning the range of basic-translational-clinical approaches, including, but not limited to:

- Cellular and molecular mechanisms of injury and repair;
- Mechanisms of neural control;
- Discovery and validation of therapies and devices;
- Neural networks and neuroplasticity;
- Embryonic development of related systems;
- Implications on other brain disorders and diseases;
- Rehabilitation strategies;
- Clinical studies on the impact of brain and spinal cord injuries on public policy with respect to aetiology and prevention of brain and/or spinal cord injury;
- Related knowledge translation or dissemination activity.

## Equity, Diversity, and Inclusion

Evidence clearly shows that increasing equity, diversity, and inclusion (EDI) in research environments enhances excellence, innovation, and creativity. Brain Canada and the Barbara Turnbull Foundation are committed to excellence through equity and encourage applicants of diverse backgrounds to apply to this funding opportunity, which will promote the expression of diverse perspectives, approaches, and experiences, including those of underrepresented groups.

## Eligibility

- Nominees must be an author on an article published, or accepted for publication, between October 1, 2020 to September 30, 2022 and affiliated with a Canadian institution at the time of publication. Articles with co-first authorship will be considered.
- Publication must be an original research article in an international peer-reviewed journal.
- Research topic and findings must be clearly relevant to spinal cord and/or brain injury, including concussion.
- Nominees must be considered an independent researcher at their institution. Such an individual normally holds the rank of assistant or associate professor; can initiate and direct their own independent lines of research as principal investigator; has full responsibility for running their laboratories; has full control of their research funds; and is permitted to supervise trainees (if

applicable, as per their institution's policy). Postdoctoral fellows or adjunct faculty are not eligible to apply.

- Nominees must still be actively conducting research in the field of spinal cord and/or brain injury at a Canadian institution for the duration of the award.
- Self-nominations (limited to one per person) and nominations by a colleague, mentor, or previous supervisor will be accepted. Please note that a publication can only be submitted once per award cycle.

## Use of Funds

The funds must be contributed towards the salary of full-time graduate student(s) (M.Sc., Ph.D.), and/or postdoctoral fellow(s) enrolled at a Canadian institution that is conducting research in the nominee's laboratory and will be directly contributing to the nominee's research in the field of spinal cord and/or brain injury. Please note that:

- Award funds can be used to support the salary of more than one full-time graduate student (M.Sc., Ph.D.), or postdoctoral fellow enrolled at a Canadian institution;
- A minimum of 25% of the total award amount must be dedicated to support the salary of each trainee;
- Use of award funds can extend up to a maximum of two years.

Importantly, the nominee and trainee(s) must adhere to the studentship and fellowship policies at their institution. It is the responsibility of the nominee and the trainee(s) to ensure that the total stipend received meets the institutional funding standard.

Finally, while Brain Canada is the designated administrative lead, all issues of material significance will be discussed with the Barbara Turnbull Foundation for Spinal Cord Research and decisions will be made jointly.

## Criteria for Assessment

The publication will be reviewed based on the following criteria (75%):

### **Innovation and Originality**

- Novel and ground-breaking results that represent a major advancement for the research area and has the potential to generate new hypotheses.

### **Impact**

- Impact of the research and findings on the understanding, diagnosis and/or treatment of spinal cord and/or brain injury;
- Relevance and importance of the journal for the target audience of the research findings;
- Spin-off projects and new collaborations that stemmed from the publication, if applicable.

### **Quality of the Research**

- Scientifically and methodologically sound.

The proposed research project to be conducted by the nominee's trainee(s) will be reviewed based on the following criteria (25%):

**Quality and Feasibility of the Research**

- The degree to which the proposed research contributes to the field of spinal cord and/or brain injury, including concussion.
- The degree to which the proposed research is scientifically and methodologically sound.

**Research Environment of the Trainee(s)**

- The degree to which the trainee(s) will be involved in the proposed research project and the conduciveness of the research environment to their involvement in the project.

**How to Apply**

All applications must be submitted to Brain Canada via email to [programs@braincanada.ca](mailto:programs@braincanada.ca) before **16:00 EST on November 30, 2022**. Applicants should contact Brain Canada if they have inquiries regarding the competition or application process.

**Timeline**

Launch of Request for Applications	October 21, 2022
Deadline for Receipt of Applications	November 30, 2022 at 16:00 EST
Notification of Award	April 2023
2022 Award Date (earliest date)	May 1, 2023

**Application Components**

The application consists of the following components, **combined into a single PDF**, and named **TTA2022 - Nominee Last Name\_Application**.

Parts 2, 3 and 5 of the application will need to be formatted using 12-point Arial or Georgia font, single-spaced, on a letter-size page with 1" minimum margins. Use of a condensed font and spacing is not permitted. Applications received in any other format, exceeding the page and word limits, incomplete, or late, will be rejected. It is the sole responsibility of the applicant to ensure the submission adheres to these requirements and is received before the deadline. There will be no appeals to late submissions.

**Part 1: Application Form (click [here](#) to download)**

- 1) In case of a nomination, information about the nominator.
- 2) Information about the nominee.
- 3) A complete citation of the published article.
- 4) Acknowledgement that, if awarded, the award funds will go towards trainee(s) salary.
- 5) Certification and Signatures: Signature of nominee (and nominator, if applicable) is mandatory for the application to be considered. Signature of the senior author of the publication is also required. As the nominee’s institution will administer the award, the signature of the delegated authority at the institution is needed. All signature pages must be submitted before the deadline to apply.

**Part 2: Research contribution and impact on the field of spinal cord and/or brain injury, including concussion – Maximum 2 pages**

Please describe how the article has significantly impacted the field(s), taking into account the criteria for assessment described above. In addition, please provide a clear description of the nominee's contribution to the research and publication.

**Part 3: Lay Summary – Maximum 250 words**

Please provide a lay summary of the publication's findings and impact on the field of spinal cord and/or brain injury. The lay summary will be used for award promotion and must be understandable by non-scientists.

**Part 4: Publication**

Please provide an electronic copy of the publication. Proof of acceptance must be submitted for articles that have been accepted, but not yet published.

**Part 5: Summary of proposed research project and trainee involvement – Maximum 2 pages**

Please include a brief summary of the project's rationale, hypothesis, methodology and expected outcomes. In addition, include a description of the trainee(s) involvement in the project and explain how the trainee(s) research environment will support their involvement. This section must include a high-level budget for the use of the award funds to support trainee(s) salary and should indicate the number of trainees that will be supported alongside the breakdown of salary support per year for up to two years.

## Review Process

Brain Canada will manage the review process. Eligible applications submitted by the deadline to apply will be reviewed by at least two members of a Peer Review Panel composed of Canadian and international members with expertise in the relevant field(s) of spinal cord and brain injury research. Brain Canada will take any conflicts of interest into consideration when assigning the reviewers.

Based on the reviewer scores, the Peer Review Panel will discuss the top applications. The Panel will recommend to Brain Canada and the Barbara Turnbull Foundation for Spinal Cord Research the strongest application. Brain Canada and the Barbara Turnbull Foundation for Spinal Cord Research will not entertain appeals against the assessment and recommendation of the Peer Review Panel.

## Confidentiality and Ownership

Brain Canada and the Barbara Turnbull Foundation for Spinal Cord Research will keep all materials submitted for this funding opportunity confidential, and only share them with reviewers, Review Panel members, and observers who have signed confidentiality and non-disclosure agreements. Funded applications will be retained for comparison of intended and actual outcomes, as part of the evaluation of the Canada Brain Research Fund.

Brain Canada and the Barbara Turnbull Foundation for Spinal Cord Research do not claim ownership of intellectual property (IP) arising from the research they fund and expect that any IP arising from this funding is developed and commercialized according to the policies of the research institutions in which the research is performed.

## Reporting and Communications

As a condition of funding, the recipient will need to submit a brief scientific report detailing the use of funds, including publications and other significant achievements, and a financial statement, no later than 60 days after the end of the award. In addition, Brain Canada may require a post-award update on significant achievements since the end-of-project report. The recipient must make every effort to attend events organized by Brain Canada and the Barbara Turnbull Foundation, and present their projects, if applicable, to demonstrate the impact of supporting research in spinal cord and brain injury. They may also be requested to participate in other knowledge exchange activities, such as podcasts, interviews, etc.

## Contact Information

For more information, or if you have any questions regarding the application process, please contact Brain Canada at [programs@braincanada.ca](mailto:programs@braincanada.ca).