



Weston Family Foundation

PROGRAM DETAILS Brain Health: Sleep 2023 Program

Background

For three generations, the Weston Family Foundation has pursued its mission to enhance and enrich the lives of Canadians. With a focus on health and landscapes, the Foundation aims to catalyze inquiry and innovation to bring about long-term change. Now in its sixth decade, the Foundation continues to collaborate with a broad range of Canadian charities to further world-class research, explore new ideas, and create tangible benefits for the communities in which it works.

The Foundation, through the Weston Brain Institute (the “Institute”), aims to catalyze and scale science-based approaches to significantly improve the health and well-being of Canadians. The Foundation will take a leadership role in tackling large problems that are under-addressed by supporting research that is particularly relevant to Canadian’s health and that empowers Canadians to improve their health and wellbeing.

A particular focus of the Foundation is to increase the number of Canadians maintaining better brain health throughout their lives (i.e., reducing incidence and progression of disease). There is growing evidence that making key lifestyle changes may reduce the risk of developing brain diseases of aging and slow cognitive decline. The Brain Health: Sleep 2023 program seeks to reduce the risk and/or slow progression of neurodegenerative diseases of aging (NDAs) by accelerating the development of healthy lifestyle approaches relating to sleep.

Important things to know about the Foundation:

- **Focus is largely on translational research.**
- **Funds are provided contingent on meeting milestones.** If your project is awarded, funds are provided in tranches when milestones are successfully completed.
- **Our application process is interactive.** You may receive feedback on your applications and, if necessary, be asked to make modifications. We also encourage you to reach out if you have questions about our funding programs.
- **Many projects are declined at the Letter of Intent (LOI) stage.** Historically, only ~15% of LOIs are invited to the Proposal phase, so that applicants and reviewers spend their time on Proposals that have an excellent chance of being funded.
- **Proposal funding rates have ranged from 30-50%.**

- **We provide more than funding.** Our grantees may also benefit from opportunities such as, the expert advice from our scientific advisors, industry exposure, networking, and international collaboration opportunities.

Section 1 Scope and Other Project Considerations

The Brain Health: Sleep 2023 program seeks to accelerate the research and development of sleep-based strategies that improve brain-related outcome measures relevant to (or associated with) NDAs. This includes observational studies (e.g., studies mining existing databases, cohort studies, biomarkers studies) and interventional studies in humans (e.g., pilot studies, proof-of-concept trials, ancillary trials). Work involving animal models/data are not in scope of the program.

Examples of projects in scope:

Interventional studies:

- Testing the impact of a sleep apnea treatment on cognitive performance and Alzheimer's disease pathology measured with PET imaging.
- Developing an intervention to improve sleep-wake cycles as a means of treating sleep and cognitive disturbances in Parkinson's disease.
- Testing a device or technology to promote slow wave sleep and improve memory function among people with NDAs.
- Testing the effect of a sleep medication on the quality of sleep and fluid biomarkers of Alzheimer's or related diseases.

Observational studies:

- Harnessing existing data to investigate whether reduced quality of sleep is associated with poorer cognitive performance and an increased risk of Alzheimer's disease.
- Collecting primary data to study the association between sleep disturbances and biomarkers of disease in the brain in an at-risk population for Alzheimer's disease.

Every project must include one or more brain related outcome measures (e.g., fluid-based biomarker, neuroimaging outcome measure, well-established clinical/cognitive measures) relevant to NDAs as a readout. Peripheral/systemic measures, if proposed, must be correlated with brain function or brain-related outcome measures. Self-reporting sleep questionnaires should be well-validated.

Developing new therapeutics or sleep technologies are not in scope of this program. However, studies using existing therapeutics are eligible if they are being assessed in the context of a sleep-based intervention and impact brain-related outcome measures relevant to (or associated with) NDAs.

If selecting a sleep technology for the proposed work, we recommend that you consider the following:

- Has the technology been validated for the proposed measures (e.g., sleep/wake, sleep stages) within the proposed study population? Has the validation been published in peer-reviewed journals?
- Does the technology meet or exceed the current “gold standard” used to measure a given sleep parameter? If not, what unique advantages does it offer to justify its use for the proposed study?
- Does the technology offer the specificity and sensitivity required for the proposed work?
- Has the technology demonstrated good test-retest reliability?
- Will the technology be evaluated in real-world settings, for example under social and environmental variables, that could affect its performance? Has it previously been evaluated under those variables?
- If using a consumer sleep technology:
 - Does it offer ease of use for the user?
 - Are there safeguards to ensure privacy of user data?
 - Can access to raw signals/data be acquired if needed for analysis?
 - Will software updates negatively impact ongoing research as well as the future replication and dissemination of the results?

Preliminary data are required for this program, which should serve to support the rationale, hypothesis and experimental feasibility of the study.

Section 2 Funding Specifications

Total funding: The Foundation is able to fund many grants through this program. Grants are contingent on the receipt of high-quality applications.

Funds available per project:

- Up to \$1.2M per project over up to 36 months, as determined by the Foundation. Funding requested should clearly reflect the amount needed to complete the aims of the study.
- Funds will be granted only for direct costs that are appropriate and justifiable for the work proposed.
- Funds cannot be used for large equipment purchases unless prior written approval from the Foundation has been obtained.
- Funds cannot be used for administrative or indirect costs or for salaries for people who already receive salaries from their institutions.
- Travel expenses to scientific conferences/meetings to present work and publication costs associated with the awarded project can be included in the budget.
- Each significant item and its cost must be clearly described in the budget (at the Proposal stage only).
- The amount granted may not be for the full amount requested if the review committee only recommends part of the grant for funding.
- A proportion of the funds can be used for unique international resources (e.g., in-

licensing IP, costs associated with accessing a database, or supporting the Canadian portion of collaborations with members from other geographies). However, it is expected that the majority of the funds will go towards work conducted in Canada.

Any grant provided by the Foundation pursuant to this Program shall be directed to the institution and not to any individual. Responsibility for the planning, direction, and execution of the proposed project will rest solely with the Applicants.

Multiple institutions: In the event of collaboration between multiple institutions, it is the responsibility of the Principal Applicant to distribute/manage funds appropriately.

Full or partial support of projects: The Foundation may provide full or partial funding support for a given application. If there is interest in supporting only a portion of a project, applicants will be asked to revise the application to reflect the portion of interest.

Larger projects: The Foundation may support an application that is part of a larger project. While the application may describe how the proposed work fits into the larger project, the primary focus of the application should be on details of the proposed work. Similarly, the application should ensure that funding requested from the Foundation for the proposed work does not overlap with funding from other sources that are supporting the larger project. In the review of such applications, the criteria for granting will only be applied to the part of the project that is requesting funding from the Foundation.

Conditional funding and milestones: Tranche payments are conditional on grantees meeting pre-determined milestones and providing deliverables, including submission of progress reports, financial reports and participation in Foundation sponsored Research Days. Funding is not automatic and is contingent upon the grant progress being favorably reviewed by the Foundation.

Supplemental funding: The Foundation encourages grantees to seek additional funds to further their work. The Foundation has no guaranteed policy for renewal or continuation of grants. The Foundation may, at its discretion, seek to further support clearly successful projects. Grantees are also eligible to apply for funding through other Foundation programs.

Section 3 Application Process

The application process consists of two stages: Letters of Intent (LOIs) and Proposals. To apply, applicants must submit an LOI to the Foundation. Selected applicants will then be invited to submit a Proposal. Both the LOI and Proposal must be completed and submitted through the Foundation's online grants management system (<https://westonfdn.smartsimple.ca/>). Each LOI and Proposal is peer-reviewed by a scientific review committee.

The LOI stage of the application process is a significant stage of evaluation. LOIs that meet the rigorous review criteria will be invited to submit a Proposal. Historically, only a small proportion of LOIs (~15%) are invited to the Proposal stage, and approximately 30-50% of

Proposals are recommended for funding. This process ensures that LOIs are easy to submit so that good ideas are not missed, while ensuring that applicants taking the time to write full Proposals have a very good chance of being funded. Budgets are only required at the Proposal phase.

If awarded, applicants must ensure that the grant agreement is reviewed and signed within 6 weeks of notification of selection; otherwise, the Foundation reserves the right to cancel the grant.

Section 4 Review Criteria

The review committee will consider the criteria listed below when reviewing LOIs. In addition, applicants will be evaluated on whether their project has been designed to align with the proposed path to impact (i.e., knowledge mobilization plan).

**Knowledge mobilization: The Weston Family Foundation is committed to delivering measurable impacts to the well-being of Canadians. With this aim, it is important to the Foundation that all funded projects intentionally undertake efforts to mobilize the knowledge generated by the project to those who can act upon it or ultimately benefit from it. These efforts should engage interested and relevant parties and help make the project's knowledge meaningful for policy, product or practice.*

- **Impact:**
 - How would the results from the proposed study advance the research and development of sleep-based strategies that improve brain-related outcome measures relevant to (or associated with) NDAs in Canada? E.g., Would the study support the clinical adoption of sleep-based interventions to reduce the risk/slow progression of NDAs? Would it provide the evidence-base for the development of guidelines for sleep as it relates to NDAs?
 - Would it benefit a significant and diverse proportion of the population?
- **Experimental approach:** Are the overall strategy, methodology and analyses well-reasoned and feasible, supported by strong preliminary data, and appropriate to accomplish the specific aims of the project? Does the selected cohort(s) represent the diversity of the population in Canada? Will the chosen methodologies ensure compliance of study participants? Are potential problem areas adequately considered and addressed? Is the project reasonably powered?
- **Innovation:** Does the project challenge or advance current paradigms and theories? How is the proposed study and/or the potential impact thereof, differentiated from others in the scholarly (or popular) literature? Will the work refine, improve or be a new application of theoretical concepts, approaches, methodologies, instrumentation or intervention?
- **Knowledge mobilization (KM):** Is the proposed KM plan well-thought out and potentially able to achieve meaningful impact for the intended end users? Does the project align well with the proposed KM plan? Are the interested parties, milestones and timelines listed in the KM plan appropriate for the achievement of the plan?
- **Fit:** Is the project, including its scale and scope, appropriate for this program?
- **Other** as needed, including qualifications of the investigator and associated research team.

Additional criteria considered when reviewing Proposals:

- **Risk appropriateness:** Is the scientific risk (likelihood that the hypothesis will not be supported) commensurate with the potential reward of the project if successful? Has executional risk (likelihood that the project cannot be completed as outlined) been addressed as much as is reasonable?
- **Team and environment:** How well-suited are the team and environment for this work? Does the work take advantage of unique features of either?
- **Timeline:** Are the milestones and timeline realistic yet aggressive for the research proposed?
- **Budget:** Is the budget appropriate for the research proposed? The budget is a secondary consideration after the other criteria have been weighed.
- **Other** as needed.

Section 5 Eligibility of Applicants

For this program, the Foundation is only able to accept LOIs and Proposals from institutions (or individuals affiliated with and applying through or on behalf of institutions) that are Canada Revenue Agency (CRA) qualified donees located in Canada. Applicants may appear in any role on any number of applications.

- Eligible Principal Applicants must be a researcher working in Canada at least 50% of the time and hold a position at or above the level of Assistant Professor or equivalent at a CRA qualified donee institution located in Canada.
- Co-applicants must be at the post-doctoral level or above and working at a CRA qualified donee institution located in Canada.
- Collaborators must be at the post-doctoral level or above and can be working outside of Canada.

The Foundation highly encourages collaboration within the research community and across multiple disciplines. Applicants should consider collaborations where possible to maximize the impact of their project.

Proposals submitted to this Program must be approved by the institution on whose behalf or through which the Proposal is being submitted. However, LOIs do not need to be approved in this manner.

Section 6 Expected Project Outcomes

The Foundation assesses the impact of awarded grants through reviewing the results and outcomes achieved for each project. It is important that projects aim to achieve outcomes that can address the goals of the Brain Health: Sleep program and the overall mission of the Foundation. The following are examples of outcomes that are expected.

Outcome	Measure (e.g.,)
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Leveraged Funding	Number and amount of additional funding support
Publications	Number of journal articles Number of book chapters Number of conference/meeting presentations
Efficacy and safety	Effect size of the intervention
Size and heterogeneity of cohort	Number of participants and number of sub-populations represented in each study
Mainstream media uptake	Number of mentions in mainstream/popular media
Resources	Number of new resources (e.g., biomarkers, sleep data repository)
Partnerships/Collaborations	Number of new partnerships/collaborations
Scholarly impact	Number of citations of papers

Section 7 Reports and Assessments

Grantees must complete the following if a grant is awarded. Templates for reports will be provided by the Foundation:

Reports:

- A milestone and a financial update are due approximately every 6 months, and prior to each scheduled tranche payment. It serves to provide an update on the completion of project milestones mutually agreed upon by the Applicants and the Foundation.
- A progress report is due annually and includes a milestone report, a budget report, relevant data, and an update on outcomes (e.g., publications, conference presentations, additional funding). A telephone discussion with the Principal Applicant, may be requested by the Foundation.

The grant is paid in tranches tied to the 1) successful completion of milestones and 2) achievement of the 'go' criteria at 'go/no-go' decision points.

Research Day: At least one Applicant on the grant must attend one Research Day per year to report on the progress of the project, unless otherwise notified by the Foundation. Additional key personnel may also attend if approved by the Foundation. Please include travel expenses for one person to Toronto for a one-day, overnight trip to Toronto within the budget.

Foundation member site visits: Foundation members may wish to visit researchers to see project work underway. These visits are not mandatory, and consent of grantees will be requested prior to the visit. The Foundation hopes that grantees will welcome this opportunity.

Financial accountability: Grantees are expected to account for the moneys expended under any Foundation grant; any moneys spent either not in accordance with the approved research project or prior to pre-approval of any material change in the

project are both recoverable and subject to restitution by the grantees to the Foundation and may be cause for immediate termination of funding. Any funding provided beyond what is needed for the agreed upon research must be immediately reported to the Foundation. The Foundation will then advise how the funding may be directed.

Section 8 Confidentiality

The Foundation treats all LOIs, Proposals, research projects and associated research information (collectively, the “Confidential Information”) in confidence using reasonable care in protecting such Confidential Information from disclosure to third parties who do not participate in the grant review process and Foundation assessments. All Confidential Information will be used by the Foundation and its scientific review committee for the purposes of reviews and assessments and will be shared only in accordance with the sharing policy as set out herein. Notwithstanding the foregoing, Confidential Information shall not include any information that:

- a) was generally known to the public prior to the effective date of this Program announcement;
- b) becomes generally known to the public through no unlawful or unauthorized act by any recipient of Confidential Information; or
- c) was independently developed by the Foundation or its scientific review committee without reference to the Confidential Information.

If the Foundation or any of its scientific review committee members are requested to disclose Confidential Information pursuant to a legal or governmental proceeding, the Foundation shall give the Applicant or other owner(s) of such Confidential Information notice of such disclosure request as soon as is reasonably practicable.

Section 9 General Information

Institutions and individuals affiliated with and applying through or on behalf of institutions (collectively, “Applicants”) should carefully discuss the Program announcement and the terms of this document with the appropriate office at their institution before submitting an application. The submission of an LOI or a Proposal does not bind either the Foundation or the Applicants by any commitment to provide or receive funding, respectively. Successful Applicants will be required to agree to terms substantially similar to those contained in this document and the Foundation reserves the right to alter, delete or add additional terms in the grant agreement between the successful Applicants and the Foundation.

The Foundation reserves the right to accept or reject any or all applications at its discretion and to negotiate the terms of the specific grant agreement with Applicants.

The Foundation, at its sole discretion, may change the timeline of the application process.

Section 10 Other

Liability and Indemnity

Each Applicant pursuant to this Program acknowledges and agrees in responding to the Program announcement that the Applicant shall have no claim against the Foundation, and its respective representatives, related companies or affiliates, should such Program response be unsuccessful for any reason. Each Applicant hereby remises and releases the Foundation, its representatives and affiliates, from any cause of action, complaint, or claim in connection with the Research Funding Announcement (RFA) process and its outcome.

The Foundation's role in grants awarded pursuant to this Program is that of a funder. The Foundation is not the sponsor of funded projects. As such, the Foundation will not assume any liability associated with funded projects and each Applicant who is ultimately awarded a grant pursuant to this Program releases the Foundation from any and all liability with respect thereto and further indemnifies the Foundation, and its respective representatives and affiliates, from any claim or loss whatsoever associated with the applicable grant.

Intellectual Property Policy and Intellectual Property Agreements among Collaborators

The Foundation acknowledges that any intellectual property ("IP") that arises from research funded through this Program, including discoveries, is not the property of the Foundation.

The Foundation requires that researchers and collaborators agree on any material IP issues prior to submission of a Proposal.

Publication and Sharing Policy

The Foundation expects results of funded research to be published as rapidly as possible in open access scientific literature or other forms of publication that are readily available to the general public and/or research community. Such publication should be consistent with high standards of scientific excellence and rigor and provide sufficient detail so the research community can benefit from the findings from or in connection with the funded project.

A lay person abstract of the research proposal must be submitted prior to funding. A lay person abstract of the research results must also be submitted no later than 9 months from the date of grant expiration. These abstracts may be made available to the public by the Foundation.

Any presentation, releases, papers, interviews, publication or other forms of communication dealing with the awarded project or the results from the awarded project must acknowledge the funding provided by the Foundation, in a manner proportionate to the contribution of the Foundation. Any other use of the Foundation's intellectual property,

including its name, logo or trademark requires prior written permission of the Foundation.

All tools or reagents (i) funded by and (ii) that result from funded projects should be made readily available to the research community either freely or at reasonable prices within 9 months of study completion. If sharing of such tools or reagents will jeopardize the Applicant's right to secure patents or copyrights necessary to protect the Applicant's ownership, then they should be made available as soon as these rights have been secured. The Foundation may let the public know of these tools or reagents so other researchers know they are available.

The Foundation encourages sharing of data and making raw data publicly available where possible.

The Foundation requires any clinical trial awarded under any of its funding programs be registered with clinicaltrials.gov, or other appropriate public registry.

Section 11 Foundation definitions

- **Brain health:** An individual's optimal level of cognitive well-being that is equal to or greater than the normal cognitive aging process and is free of brain diseases/conditions (e.g., neurodegenerative disease of aging).
- **Neurodegenerative diseases of aging:** Alzheimer's disease, frontotemporal dementia, dementia with Lewy bodies, multiple system atrophy, Parkinson's disease, progressive supranuclear palsy, vascular contributions to the listed diseases, and prodromes to the listed diseases (e.g., mild cognitive impairment as prodromal to Alzheimer's disease; REM sleep behavior disorder as prodromal to Parkinson's disease).
- **Lifestyle approach:** Behavior(s), exposure(s) and/or environment(s) that can be modified to improve brain-related outcome measures relevant to (or associated with) neurodegenerative diseases of aging as defined by the Foundation.
 - Examples include diet, physical activity, stress, sleep, social engagement, hearing function, cardiovascular function, weight control, smoking, treatment-responsive depression, metabolic function, or a combination of such factors.
- **Therapeutic:** A pharmacological approach (including small molecules, biologics, cell therapies, and vaccines, including drug repositioning and repurposing), medical device, surgical intervention, or magnetic or electrical brain stimulation.
- **Clinical trial:** Research in which one or more human subjects are prospectively assigned to one or more interventions to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes.

For any questions regarding the scope of your project, please contact Dr. Rene Prashad at 416-967-7835, rene.prashad@westonfoundation.ca