



Neuromuscular Research Program

2020-2021 Grant Competition

MUSCULAR DYSTROPHY CANADA
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Request for Proposals 2020/2021 Neuromuscular Disease Research Program

About the Funding Program

Muscular Dystrophy Canada's Annual Neuromuscular Disease Research Grant Program invests in meritorious projects related to the diagnosis, treatment, or health management of neuromuscular disorders. These "Seed Grants" are intended to fill gaps in the existing funding landscape by supporting investigators in the development of new and innovative research directions and creation of proof-of-concept, feasibility and pilot studies in preparation for larger-scale, longer-term grants from external sources.

Full Application Deadline: [February 2, 2021 at 11:59 pm \(EDT\)](#)
Notice of Decision: April 2021
Funding Start Date: May 1, 2021

Each year additional funds may be available in disease-specific areas, through designated funds generously provided by donors, which may be accessed to fund relevant meritorious applications. **This year special consideration will be given to the applications falling in the areas of Myotonic Muscular Dystrophy, Facioscapulohumeral muscular dystrophy, Immune-Mediated Myopathies, Charcot-Marie-Tooth Disease, and Pediatric neuromuscular disorders.**

About Muscular Dystrophy Canada

Muscular Dystrophy Canada (MDC) is a national, non-profit organization whose mission is to enhance the lives of those impacted with neuromuscular disorders by continually working to provide ongoing support and resources while relentlessly searching for a cure through well-funded research.

MDC works to support individuals affected by NMDs in the "here and now" through our system navigation program, which provides programs and services outside of the traditional circle of care. These include equipment and assistive technology, transportation, housing, employment, and education. At the same time, we also invest in "tomorrow" by funding research, which fosters advances in improving health outcomes and influencing positive change systemically.

If you have any questions about this research program, please contact:

Daria Wojtal, PhD
Director of Research, Muscular Dystrophy Canada
research@muscle.ca

2020-2021 Research Grant Guidelines

- ❑ *Compliance with this guide is a condition of applying for, holding or administering MDC grant funds.*

1. Objectives

The primary objective of this grant competition is to solicit research proposals under the two categories outlined below that will have an impact on a single Neuromuscular Disorder (NMD) or with cross-cutting impact across different types of NMDs covered under Muscular Dystrophy Canada's umbrella (See Section 8 for description of disorders which fall under MDC's umbrella).

Applicants may apply for one of the following two categories: Please select the category where your proposal would align best.

1.1. Translational Science Seed Grants

Research under this theme will apply knowledge from basic biology to develop potential diagnostic and/or therapeutic interventions in the pre-clinical setting. The aim of these grants will be to obtain results that will be leveraged by the researcher to apply for larger grants outside of MDC. This may include:

- Pre-clinical testing (cell or animal model) of potential therapeutic interventions
- Pre-clinical validation of new diagnostic tools/tests
- Pre-clinical validation of approved compounds or therapeutic intervention in new models of disease

Translational Science Seed Grants should include:

- A description of how this research will impact those living with NMDs and/or how the project fulfills an unmet need in the specific research area
- A defined plan to collect preliminary data and to lay the foundation for a larger study including defined path for translation i.e. plans for commercialization, technology transfer, and/or clinical trial development; these may include strategic partnerships or leveraging of data to apply for government/industry innovation grants, planned incubator/accelerator opportunities that will be pursued etc.
- Collaboration between researchers, clinicians and knowledge-users

Grants that will not be considered are:

- Projects that focus solely on basic science research and do not clearly delineate a path to translation or clearly fill a crucial need.
- Projects with aims that overlap with funding from Muscular Dystrophy Canada either through a previous year MDC Seed grant or other partnership funding program awarded to the applicant or their team member.

1.2. Clinical Health Management Grants

Research under this theme will seek to improve or inform clinical health management and policy including decreasing secondary health conditions, improving quality of life and standards of care. This includes;

- Clinical or retrospective studies seeking evidence-based informed Standards of Care, health policy
- Clinical studies focused on evaluating novel potential therapeutic interventions like physical agents; medical devices; surgery; pharmaceuticals; biologics
- Clinical studies aimed at improving quality of life through the assessment of new technology, new treatment methods, rehabilitation in a clinical setting
- Clinical studies identifying/optimizing new methodologies for health monitoring (with or without treatment)

Clinical Health Management Grants should include:

- Description of how this research will impact patient lives; or how the project fulfills an unmet need in the specific research area;
- A defined path for knowledge translation*
- Mitigation strategy in case COVID19 restrictions persist through the duration of grant i.e. method of patient recruitment, in-person study requirements
- If the study involves healthcare system and services research it must be conducted in Canada or with the inclusion of the Canadian healthcare system and be relevant to Canadians affected by NMDs.

Grants that will not be considered are:

- Projects with aims that overlap with funding from Muscular Dystrophy Canada either through a previous year MDC Seed grant or other partnership funding program awarded to the applicant or their team member.
- Projects that do not answer a fundamental research question but rather develop a product or a collection of resources i.e. Project where the sole aim is to produce a knowledge translation product*, funding for training or educational initiatives, establishment/upkeep of research resources such as registry or biobank.

***NOTE:** If appropriate proposals should include knowledge translation as an outcome, there must be a clearly defined research objective. Also it should be clearly defined who the knowledge users are and which (if any) patient groups/charities are involved as knowledge users or patient experts.

2. Funding

This cycle the available project funding is \$30,000 per year for up to 2 years (total value up to \$60,000. Projects should be carried out within a maximum two-year period, beginning May 2021).

Please note, only one grant can be held within a 2 year period. See “Applicant Eligibility” below for more information.

3. Applicant Eligibility

An *Applicant/ Principal Investigator* is recognized by MDC as the author of the intellectual content of the application submitted. In the case of multi-authored applications, MDC will correspond with the first (principal) applicant listed. *See Co-Investigator below.* A lead Principal Investigator (PI) will assume the administrative and financial responsibilities for the team grant even if Co-applicants/Co- Investigators are listed. The lead PI’s institution will be deemed the host institution for the grant and will receive the funding disbursements from MDC.

Principal Investigators must hold an academic position in an affiliated Canadian institution, or an internationally recognized academic institution and have at least one academic Canadian Co-Investigators. Eligible research institutions include those that are accepted under CIHR and NSERC’s grant policies <https://cihr-irsc.gc.ca/e/36374.html>. Other institutions, including those outside of Canada, will be considered on an ad hoc basis during the peer review process, and may be required to provide additional documentation to support the application. If the PI does not hold an academic appointment at the time of submitting an application but will by the start date of grant, a letter from the Dean of the Faculty or Department Chair must be uploaded with the application, indicating the planned position and the date it will take effect.

We encourage collaborations from multicenter and multidisciplinary teams to strengthen and innovate research projects.

A *Co-applicant/ investigator* is the co-author of the intellectual content of the application submitted. This is an individual who is expected to actively participate in the proposed activities but not to direct them. This may include individuals with academic positions or individuals outside of academia but with relevant expertise.

A *Collaborator* is an individual whose role in the proposed activities is to provide a specific service (e.g. access to equipment, provision of specific reagents, training in a specialized technique, statistical analysis, access to a patient population, patient expert input etc.).

***NOTE:** Private corporate entities are not eligible for funding.

A lead investigator may only apply to one of the two research themes in a given year (Translational Seed Grant or Clinical Health Management Grants). In the same competition, a maximum of two applications may be submitted in the circumstance that one is as a Principal Investigator and the other as a Co-Applicant which is not receiving direct funding in the Co-Applicant capacity. There are no limitations on collaborators as long as direct funding is not received from multiple grants in this competition.

In addition, a Principal investigator can only hold one active seed grant from MDC. Previously funded Investigators with expired grants, should indicate if there is overlap with any previously funded MDC grant and the current application.

*An active grant is defined as:

1. A MDC funded grant for which the end date occurs after the funding start date of current competition OR
2. A MDC funded grant that is currently on a no-cost extension and completion date occurs after the funding start date of current competition.

Principal investigator currently receiving funding from MDC from partnered competitions (i.e. CIHR, E-Rare, Jesse's Journey partnerships) are eligible to apply in MDC's Annual Grant Competition as a Principal Investigator or Co-Investigator, but should indicate in budget justification if there is overlap between the current application and the partner funded project.

4. Grant Application

Applicants must complete the online applications available via the **proposalCENTRAL** website by the deadline specified. Applications are not accepted via email or mail. It is the responsibility of applicants to ensure their applications are complete. Incomplete applications will be disqualified from the competition. An email acknowledging receipt of the application will be sent.

4.1. Submitting a Grant Application through proposalCENTRAL

1. Visit <https://proposalcentral.altum.com/>
2. Login using your ORCID ID, or create a new ORCID account for first-time users (See Section 4.2).
3. Select the "Grant Opportunities" tab.
4. Filter the list by grant maker: "Muscular Dystrophy Canada". Please note that Muscular Dystrophy Canada (MDC) is not affiliated with our USA counterpart Muscular Dystrophy Association (MDA).
5. Find the appropriate program on the list and click "Apply Now".
6. The system will take you through the application steps. Clicking "next" will save the previous section's entry.
7. Please note the application instructions in the light blue boxes on each page of the application.
8. Upload all necessary documents (templates provided).
9. Validate your application and submit. You will be prompted by proposalCENTRAL to complete an additional signature page, however, you are NOT required to submit this form.

PLEASE NOTE THAT WHEN COMPLETING AN APPLICATION, THE SYSTEM ASKS FOR INFORMATION THAT MUSCULAR DYSTROPHY CANADA DOES NOT REQUIRE. OPTIONAL FIELDS ARE INDICATED ON THE FORMS. FOR CLARITY, THE FIELDS NOT REQUIRED BY MUSCULAR DYSTROPHY CANADA INCLUDE: DATE OF BIRTH, PASSPORT NUMBER, AND SOCIAL SECURITY NUMBER. DO NOT PROVIDE THIS INFORMATION.

4.2. Online Application

The application consists of a series of online questions typed directly into the application as well as the PDFs listed below which are to be uploaded on the online grant portal. Progress can be saved online at multiple stages but we do suggest that all typed answers are also saved outside of proposalCENTRAL as a backup in case of a technical issue.

Mandatory Uploaded PDFs

1. Signed Cover Page
2. 4 page Project description. Items that do not count towards the page count are Bibliography and Figures and Tables. Figures and Tables should not be interwoven with the text of the Research Plan, instead please add to the end of document
3. Canadian Common CV (CIHR- Biosketch version) for Principal Investigator
4. Canadian Common CV (CIHR- Biosketch version) for Co-Investigators(s) (if applicable)

Optional (if Applicable) Uploaded PDFs:

5. Canadian Common CV (CIHR- Biosketch version) for collaborators.
6. Appropriate research ethics human subject approvals (e.g., IRB, IRB Approved Patient Consent Forms) and/or animal approvals (e.g., approval letter from IACUC or Exemption letter from IACUC)
7. Additional supporting documents (if applicable)

For full application instructions please see detailed directions provided within the application itself. Please note there are two Muscular Dystrophy Canada applications listed in proposalCENTRAL, one for grants falling under the scope of Translational Science Seed Grants and the other for Health Management Grants. See [Objectives in Section 1](#) and [Eligibility Section 3](#) for full details.

4.3. ORCID ID

ORCID id is required to start an MDC Grant application. This is a unique numerical identifier which stores information about an individual similar to what you would see on a CV or resume including biographical information, employment, education, awards and distinctions, funding and works.

ORCID ID is integrated into ProposalCENTRAL and can be use to pre-fill some sections of any grant application on ProposalCENTRAL without having to retype fields. This function allows for reduced administrative burden, as well as aids with end of grant reporting. For more information and guidelines see:

ORCID 101 for Individuals (4 min. video): <https://youtu.be/G2GI0rVq-Jg>

ORCID 101 for Individuals (text): <https://www.lyrasis.org/Leadership/Pages/ORCID-101-for-Individuals.aspx>

Adding works to ORCID: <https://support.orcid.org/hc/en-us/articles/360006973133-Add-works-to-your-ORCID-record>

Adding funding to ORCID: <https://support.orcid.org/hc/en-us/articles/360006897214-Add-funding-information-to-your-ORCID-record>

4.4. Language

MDC is a nation-wide organization and serves the scientific community and public in either of Canada's official languages where feasible. Please indicate your preferred language of correspondence in your online application. We ask however that application themselves be submitted in English as MDC prioritizes scientific expertise when selecting Canadian and international reviewers. As such we are unable to guarantee French speaking reviewers who also have the appropriate scientific expertise. Additionally, there are significant costs incurred to translate applications for the review process and we are unable to guaranteed the scientific accuracy of those translations.

4.5. Level of Funding and Expenses

The maximum total budget per project is or \$30,000/yr for a maximum of 2 years (total up to \$60,000 over two years). The amount requested must be quoted in Canadian dollars. Payments will be made every 6 months, exact dates and amounts will be outlined in award letter to successful applicants based on budget requested.

Generally, funds will be awarded as follows:

35% of Funding Amount in April 2021

15% of Funding Amount six months from grant start date contingent on receipt of ethics approval(s)

35% of Funding Amount on receipt of Year 1 Progress Report

15% of Funding Amount at one and a half years post start date

MDC follows the Canadian Tri-Agency Guide on Financial Administration*, these 4 basic principles govern the appropriate use of grant funds.

Grant expenditures must:

- contribute to the direct costs of the research/activities for which the funds were awarded, with benefits directly attributable to the grant
- not be provided by the administering institution nor be for work and services provided by the administering institution to other research personnel, such as routine lab maintenance, security, etc.
- be effective and economical meaning that it achieves the intended outcome with due regard for minimizing cost by avoiding unnecessary expense. This means the expenditure is considered an optimal use of the funds, which may not necessarily mean the “lowest cost.”
- not result in personal gain for members of the research team

In this Grant Program allowable expenses include :

- Salaries for staff engaged with the project, including technicians, research coordinators and qualified trainees (students and Postdoctoral fellows)
- Costs for direct data and information collection
- Acquisition of goods and services for the funded research/activities like Research reagents, materials, research equipment (not supplied by research institution.

Ineligible expenses include:

- Indirect expenses (i.e. payments towards general institutional overhead)
- Travel/hospitality expenses
- Consulting fees to grant recipients or **individuals who conduct research independently** as part of the terms and conditions of their employment or individuals expected to work on the funded research/activities free of charge as a collaboration

Administering institutions are responsible for ensuring that the funded research items are:

- authorized by grant recipients or their delegate(s)
- eligible, in accordance with MDC grant guidelines
- procured and paid/reimbursed in accordance with the administering institution’s policies and processes

*For more details see: https://www.nserc-crsng.gc.ca/InterAgency-Interorganismes/TAFA-AFTO/guide-guide_eng.asp

4.6. Other Funds

All applicants must list all active and submitted grants as well as grant that expired within the last 3 years. For active and submitted grants, state the nature and percentage of overlap. The title, summary, budget, agency, precise dates, and tenure of these award(s) must be provided. If an application on the same subject is pending from another agency, the applicant should immediately notify Muscular Dystrophy Canada of the results as soon as they are known. Summary and budget pages for other grants held by Co-Principal Investigators are not required.

4.7. Ethics

Ethics approval if not already obtained at the time of application must be obtained within 6 (six) months from the award date. If it is not obtained, funding will be withheld until it is received. Proof of Ethics approvals should be uploaded with application if available at submission otherwise, it should be provided to Muscular Dystrophy Canada once obtained.

4.8. Reviewer Exclusions

Up to three individuals may be excluded as reviewers. These individuals may be Canadian- or internationally based- scientists.

4.9. Uploaded document: Project Description

Applicants should provide a clear, concise description of their research proposal and upload to *Section: Attachments*. A **maximum of 4 pages** may be submitted. Page limits do not include references, tables, charts, figures and photographs which may only be included after the bibliography. Applicants are permitted to submit figures and/or tables describing preliminary data and relevant legends. Legends should be succinct. Questionnaires and consent forms may be uploaded as appendices, where applicable.

Detailed Research Report Formatting:

- Text must be single-spaced, 11 point Arial font size (including labels and descriptions accompanying figures, tables, charts, photographs, etc.)
- Header: Principal Investigator's surname in right corner.
- Footer: Number the pages consecutively with page numbers centered.
- Leave a minimum 2 cm margins on all sides

Describe the research project using the following headings.

1. Background

Describe the issue(s) the proposal plans to address. Additionally, if the research study is being conducted with disorder specific inclusion criteria and/in a model of a specific neuromuscular disorder (NMD), please describe if there is a broader applicability to other NMD. i.e. what aspects of the methodology, tested treatment, findings may inform treatment and/or care for other neuromuscular disorders. This question may not be applicable to research proposal with a cross-cutting theme.

2. Objectives

State the primary and secondary objectives and rationale.

3. Methodology

Describe the activities, methods and processes for achieving the identified objectives. Provide a work plan with corresponding timelines. Discuss potential difficulties and/or limitations of the proposed procedures and alternative approaches to achieve aims.

4. Deliverables

Identify the anticipated outcomes. These deliverables should be consistent with the above objectives and activities. Identify products (if appropriate), and possible knowledge translation implications, including key audiences and stakeholder groups that may benefit from the research results.

5. Evaluation Process and Criteria

Applications will be assessed through a competitive peer-review process by Canadian and international scientific reviewers as well as members impacted by a NMD for a lived experience perspective. As such MDC places a high priority on ensuring appropriate lay summaries are submitted as part of each application.

Review panel members will declare any conflict of interest with any application and excuse themselves from its review. This includes individuals from the same institution as the applicants or individuals working in close collaboration with the applicant or direct competitors. Final approval will be through MDC's Board of Directors.

5.1. Evaluation Criteria

Each application is assessed on a 5-point scale adapted from CIHR. The score assignment is based on the review panel's assessments of the application, consideration of the application itself, and the reports of the reviewers. The Evaluation criteria include Significance/Impact including prospect for translatability; Originality; Research Strategy, Feasibility and Budget; Investigator and Team. If applicable, a history of fund usage of past MDC funding including compliance with end-of-grant reporting will be considered. Summarized anonymous feedback will be provided for all applications submitted, whether they were successful or not.

Reviewers are matched based on relevant scientific expertise and management of conflicts of interest. MDC considers a conflict of interest as anything that interferes with, or could reasonably be perceived as interfering with, the full and objective peer review. This includes a co-applicant or collaborator relation with the applicant, employment at the same institution as the primary applicant, active collaboration on any ongoing research projects and/or you both hold an active research grant with the primary applicant, a personal relationship with the primary applicant including mentor/mentee, research supervisor, graduate student.

Applicants are also permitted to list up to three individuals based in Canada or internationally who they would wish to exclude as reviewers due to direct competition.

6. Notification

Applicants will receive notification on proposalCENTRAL with summary of reviewer comments. An official notification of Muscular Dystrophy Canada's decision will followed. The Finance office of the University or Institution concerned is also notified of grants awarded.

7. Grant Reporting

With acceptance of seed grant funding, researchers accept the following commitments:

- Reporting on progress – A one-page progress report will be required at the end of each funding year before second year funds are released.
- Plain language reporting – One Knowledge Translation activity consisting of a plain language MDC webinar or conference presentation in a seminar-style setting at the end of the project.
- End of Grant Reporting consisting of a financial and end of grant progress report submitted no more than 3 months after grant expiry submitted via ProposalCENTRAL templates provided. As well as a 2 year-post grant brief survey update. Examples of End Grant Reporting forms can be found here <https://muscle.ca/researchers/forms/>

Compliance with end of grant reporting allows MDC to acknowledge contribution to knowledge synthesis, enable knowledge dissemination, demonstrate impact to donors supporting the research program as well as ensure that ongoing funding is available for future research initiatives. Failure to meet these commitments precludes future funding through the MDC seed grant program.

8. MDC's Disorder Umbrella

Muscular Dystrophy Canada provides funding for programs and services including research involving muscular dystrophies as well as neuromuscular disorders more broadly that are medically defined as hereditary or immune-mediated conditions which primarily affect:

- Muscle (such as Muscular dystrophies, Hereditary or Immune-mediated myopathies),
- Neuromuscular Junctions (such as Hereditary or Immune-mediated myasthenic conditions)
- Peripheral nervous system (such as Hereditary motor and sensory neuropathies; Immune-mediated Neuropathies; Lower* motor neuron disorders)

***NOTE** upper motor neuron disorders (i.e. Amyotrophic lateral sclerosis /Primary Lateral Sclerosis) are not covered by MDC (Please see ALS Canada for funding opportunities)

Additionally, MDC's umbrella does not cover health conditions which may be, in some circumstances, systemic and present with a neuromuscular phenotype but where the etiology of the disease would not lend itself to be medically described as neuromuscular disorders with genetic or autoimmune cause.

These exclusions include:

Anatomy:

- Genetic, autoimmune and paraneoplastic disorders with primary central nervous system (brain, spinal cord) involvement including Spinocerebellar ataxias, Leukodystrophies, Hereditary spastic paraplegia, Multiple sclerosis, Huntington's, Parkinson's, Cerebral palsy, encephalopathies, myelitis.
- Health conditions with primary bone or connective tissue involvement i.e. osteoporosis, structural developmental anomalies of the skeleton

Cause:

- Health conditions caused by injury, poisoning or certain other consequences of external causes including
 - acquired traumatic conditions due to birth-related injury and/or other accidents (i.e. Brachial plexopathy, spinal cord injuries);
 - acquired traumatic conditions secondary to a non-NMD condition or its treatment (i.e. diabetic polyneuropathy, plexopathy, peripheral neuropathy due to cancer treatment);
 - acquired conditions due to poisoning (i.e. alcoholic/drug-induced myopathy, neuromuscular junction disorders due to toxicity);
 - acquired conditions due to age or lack of motion due to an acquired non-NMD underlying condition or procedure like brain injury, post-surgery recovery (i.e. Sarcopenia, coma related muscle atrophy)
- Health conditions caused by infection or parasitic diseases (i.e. Botulism, Lyme disease, peripheral neuropathy due to HIV)

If you are unsure if a condition is covered by MDC please contact MDC's Research Department

9. Requests for Extension

If a no-cost extensions is required due to a leave of absence and/or unforeseen circumstances please contact Muscular Dystrophy Canada. Requests should indicate reason for required extension, duration as well as identify changes in scope/research aims and budget allocations. All request will be evaluated based on original proposal and decisions will be made at an ad hoc basis.

10. For Support

For technical support with your online application, contact proposalCENTRAL:

pcsupport@altum.com

Weekdays, 8:00 am to 5:00 pm EST

For program information, guidelines, disorder list contact Muscular Dystrophy Canada's Research Department:

Daria Wojtal, PhD | Director of Research, Muscular Dystrophy Canada

research@muscle.ca | 1 800 567-2873 ext. 1114