



**endMS Scholar Program for Researchers IN Training
(SPRINT)**

2019-2020 Program Guidelines

Last Updated: January 17, 2019



Table of Contents

| | |
|--|---|
| PROGRAM OVERVIEW | 3 |
| Description of Program Components..... | 4 |
| endMS Summer School | 4 |
| Travel awards | 4 |
| An interdisciplinary learning project and team mentored learning | 4 |
| endMS SPRINT Stipend..... | 6 |
| LEARNING OUTCOMES | 6 |
| ELIGIBILITY | 7 |
| Application procedure:..... | 7 |
| Deadline: | 7 |
| SELECTION PROCESS | 7 |
| TERMS AND CONDITIONS | 7 |
| endMS SPRINT Alumni..... | 8 |
| Travel Awards | 8 |

These program guidelines have been prepared to provide information about the 2019-2020 endMS Scholar Program for Researchers IN Training (SPRINT), one of the national training programs of the endMS Research and Training Network.

While every effort has been made to ensure that the information in this document is current, the endMS National Training Program reserves the right to modify policies and/or make changes to the program and/or requirements as required. The electronic version of this document, available online, is the most current and should always be used for reference.

Welcome to the endMS Research and Training Network

The MS Society of Canada launched the endMS Research and Training Network in 2006 through funds related to the MS Scientific Research Foundation as the flagship investment of the \$60 million endMS capital campaign. The overarching aim of the endMS education and networking programs is to accelerate discovery in the field of MS within Canada. Through innovative training and funding programs, the endMS Network aims to attract, train and retain MS researchers and increase opportunities to conduct MS research in Canada.

The endMS Network has grown a dynamic community of researchers, clinicians and trainees with diverse interests and expertise. As an interdisciplinary group, the network includes a range of disciplines such as cellular and physiological sciences, health care, epidemiology, neuroscience, genetics, pharmacology, rehabilitation, immunology, imaging, sociology, education, applied psychology as well as nursing science.

Welcome to endMS SPRINT

We are pleased that you are considering joining the program and are excited about the prospects of learning and working together with you to expand the community of trainee researchers who, over time, will become experts and leaders in the field of MS research.

The information in these program guidelines will help you determine if you are eligible for SPRINT and if so, will assist you in preparing an application. To apply for the program, please refer to the online application guidelines available on the [SPRINT page](http://www.mssociety.ca/trainingprogram) at www.mssociety.ca/trainingprogram

PROGRAM OVERVIEW

SPRINT is a national training programs aimed to enhance knowledge and skills related to MS research among trainees and increase opportunities to conduct MS research in Canada.

Applicants should consider the added value the program would provide them over and above their current training program. It is anticipated that applicants will most likely have completed the required coursework in their respective academic programs and be able to devote the necessary time to the participation requirements of SPRINT.

Trainees enrolled in endMS SPRINT will:

1. Participate in the next **two** consecutive [endMS Summer Schools](#).
2. Receive [travel awards](#) to attend:
 - a. the next two endMS Summer Schools
 - b. two small team mentored meetings
3. Participate in an [interdisciplinary learning project](#).
4. Be assigned a SPRINT mentor and participate in [team mentored learning](#).
5. Receive a [SPRINT stipend](#) of \$ 2,500.

Duration: 13 months starting in May 2019 and ending June 2020

Time commitment required: 2 weeks (endMS Summer Schools) plus approx. 8 hours per month¹ (over the period between the two Summer Schools)

Approximate monetary value of SPRINT per trainee including the stipend: \$ 10,000

Description of Program Components

endMS Summer School

The endMS Summer School is an annual interactive education program that aims to enhance knowledge and skills in MS research among applicants at the graduate and postdoctoral/clinical fellowship levels. Attendance at the Summer School is not restricted to SPRINT trainees. **SPRINT and Summer School have separate application and review processes and timelines.** Unsuccessful SPRINT applications will **not** automatically be considered for acceptance into the 2019 endMS Summer School. **SPRINT applicants are advised to also apply separately for the 2019 endMS Summer School so that if the SPRINT application is unsuccessful, SPRINT applicants can be considered for admission to Summer School.**

The endMS Summer School enables trainees from a variety of disciplines to come together in a small group setting to learn about MS relevant research topics. The Summer School's small group sessions are designed to facilitate networking, collaboration and information exchange among participants. While the focus alternates between basic science one year and clinical and population health research the next, sessions are developed to be of interest to all trainees irrespective of their background training. Emphasis is placed on creating an interdisciplinary agenda that strives to offer participants a more comprehensive understanding of the topic being discussed.

More information including the theme, objectives and the application process for the 2019 endMS Summer School, being held from May 26th-29th in Calgary, AB is available at: [endMS Summer School](#)

Travel Awards

Travel awards will be provided for SPRINT trainees to attend the next two endMS Summer Schools. Trainees will also receive funding to attend two small group mentored meeting to work on their interdisciplinary learning project. See Travel Awards section, at the end of this document, for details.

An interdisciplinary learning project and team mentored learning

A goal of the interdisciplinary learning projects is to provide trainees with the unique opportunity to expand their areas of research interest in a structured way under the supervision of a mentor and in collaboration with one or more co-trainees from different disciplines. Knowledge dissemination from the projects include the development and distribution of an information brochure for people living with MS and researchers; an article for publication, preparation of an educational newsletter or presentation for people living with MS, etc.

Based on the information provided in the application, teams of three trainees from different disciplines will be partnered with a SPRINT mentor (established MS researcher) by the National Training Program and SPRINT Committee. The SPRINT mentors will develop and guide the interdisciplinary project. The SPRINT trainee teams will work on the project with their SPRINT mentor during the period between the two endMS Summer Schools. The project should require approximately 8 hours of work per month and will be developed, supervised, and assessed by the SPRINT mentor.

¹ While the aim is to have the trainees devote no more than 40 hours to the interdisciplinary project, our experience has been that often the project work expands beyond this. We encourage trainees and mentors to discuss the project expectations at the outset and review expectations over the course of the project to ensure that the project does not expand beyond what is reasonable for both trainee and mentor.

The following are the interdisciplinary learning projects completed by past SPRINTers.

1. **Demystifying the mechanism of action of a new immunomodulatory therapy.** Understanding the biological basis of fingolimod. A literature review with the goal of preparing an educational presentation for people with MS.
2. **What worsens or improves MS? From blogs to biology.** Examination of what people with MS think causes or worsens their disease and identification of the possible rationale for these beliefs. The outcomes lead to potentially novel and testable questions for future investigations.
3. **Depression and Multiple Sclerosis, A Review.** A comprehensive literature review of depression associated with MS. The review included epidemiology, phenomenology, genetics, immunology, disease modifying drugs, brain imaging, all forms of treatment, differential diagnosis, and relationship to pseudobulbar affect. The major outcome of the project was a publication in Nature Reviews Neurology. (Nat Rev Neurol. 2014;10(9):507)
4. **Pain in MS-A project in translating knowledge from researchers to patients.** A literature review as well as interviews with patients regarding pain in MS with the goal of developing an information packet for a lay audience. The major outcome was a handout on pain, designed for people with MS.
5. **Development of an Interactive Fatigue Education Resource for Persons with MS.** As part of the project, initial feedback was obtained from health care professionals and people with MS. The major outcome of the project was a poster presentation at the 2013 Consortium of MS Centres conference and a successful pilot grant submission through the Foundation of the Consortium of MS Centres.
6. **Biology of sex-based differences in multiple sclerosis incidence and progression.** Reviewing the literature on pregnancy, menstrual cycling, breast-feeding benefits, oral contraceptive use in MS and in rheumatoid arthritis. Major outcome was a publication (Curr Top Behav Neurosci 2015, 26:57)
7. **EAE for Dummies: Bridging the gap between animal and human researchers.** Reviewing the immune-based animal models of multiple sclerosis and then specifically look at some of the new models that are available now. The goal of the project is to write a paper to help bridge the gap in communication between human and animal MS focused researchers.
8. **Lost in translation: The journey from a transcranial magnetic stimulation laboratory to patient friendly newsletter.** Developing a participant newsletter summarizing neuroimaging and transcranial magnetic stimulation methods being used in an ongoing study on MS.
9. **The Effects of Anti-Oxidant Supplements on Progression of MS: A Systematic Review of Human and Animal Studies for Clinicians and Patients.** A systematic review of the effects of an anti-oxidant diet on MS progression considering both animal and human research. The goal of the project is to develop a pamphlet. The outcomes included an article written by Memorial University on the SPRINT team project meeting held at the University as well as a poster presentation at ACTRIMS-CMSC Meeting in Dallas, Texas, which won the patient information category. Major outcome was a publication in Multiple Sclerosis Journal: <http://msj.sagepub.com/content/21/12/1485.abstract>
10. **Cholesterol and markers of cholesterol turnover in multiple sclerosis: relationship with disease outcomes.** The goal is to conduct a review of cholesterol, cholesterol intermediates and related metabolic enzymes as potential biomarkers of MS disease progression. Major outcome was a review article published in Multiple Sclerosis and Related Disorders Journal: <http://www.msard-journal.com/article/S2211-0348%2815%2930012-2/abstract>
11. **Upper limb intention tremor in multiple sclerosis: A review of the literature.** To understand the mechanism of intention tremor in MS, a systematic review was conducted. This included the pathophysiology, anatomy, and resulting mechanism underlying this problem.
12. **The use of corticosteroids in multiple sclerosis.** The goal is to write a review paper on the use of corticosteroids, summarizing the evidence for its clinical use, effects on MRI as well as including basic science evidence regarding mechanism of action in the MS brain.

13. **MS Moves: Bringing Exercise Research Findings into the MS Clinic Developing a practical tool to facilitate knowledge translation processes among health professionals.** Project is focused on a) identifying critical content for inclusion in the health professionals section of the MS Moves website (MS Moves is a virtual physical activity resource centre for the MS community) and b) developing a database of evidence summaries that present cutting edge physical activity research in a quick to read and easy to understand format.
14. **A scoping review on coping and MS** and identifying gaps in the literature.
15. **A literature review on the relationship between physical activity and fatigue in MS.** The team will look at exercise rehabilitation and explore the differences between MS related fatigue vs. being active. Major outcome has been a review article published in Critical Reviews™ in Physical and Rehabilitation Medicine Journal: DOI: 10.1615/CritRevPhysRehabilMed.2016017097 pages 259-274
16. **A review paper on the role of neutrophils.** Accumulating evidence suggests that neutrophils contribute to EAE and perhaps some forms or stages of MS.
17. **A scoping review on MS and the physical, cognitive and emotional concerns of persons living with high level disability.**
18. **A literature review focused on better understanding how the circadian rhythm can affect patient outcomes in MS,** with a focus on pain including studying the effect of circadian rhythms in animal models of MS.
19. **A scoping review of modifiable risk factors in pediatric MS.** Major outcome was a publication in: Children (2018) 5, 146; doi:10.3390/children5110146
20. **A literature review on lesion-associated inhibitory factors and the challenges to remyelination.**
21. **A literature review of our current understanding of how pre-existing helminth infection or helminth immunotherapy influences disease development or progression.**
22. **An examination of the potential role of physical activity and exercise for managing comorbid health conditions in people with MS.** Major outcome was a publication in Multiple Sclerosis and Related Disorders 26 (2018) 19-32

The 2018-2019 SPRINT teams are working on the following projects:

1. A review of research examining the impact of MS-related cognitive dysfunction on occupational, social, and daily functioning, and quality of life.
2. The development of an interactive resource for people with MS to help them improve their communication skills to optimize their interactions with their healthcare providers.
3. Exploring different factors that are often considered in choosing the best available drug treatments for MS patients.

As part of the interdisciplinary learning project, trainees will be expected to have one face to face small group mentored meeting with their SPRINT mentor and will be required to present a brief oral presentation on their projects at the 2020 endMS Summer School.

endMS SPRINT Stipend

For the time devoted to SPRINT, trainees will receive a stipend of \$2,500. Half of the stipend will be paid in September 2019 and the remainder upon the successful completion of the program following the 2020 endMS Summer School.

Learning Outcomes

SPRINT trainees can expect to expand and strengthen their knowledge and skills in several areas of competence, which may include:

- Written and oral communication;
- Ethical and scholarly research;

- Interpersonal, team and leadership development;
- Multi-disciplinary knowledge exchange; and
- Knowledge and skills related to MS research.

Eligibility

To be eligible, applicants **must be in one** of the following situations:

- enrolled in a graduate program at a Canadian university
- be a postdoctoral/clinical fellow (must have completed their PhD in the last 4 years or less at the time of the application) at a Canadian university
- completed graduate training and currently enrolled in an undergraduate program (e.g. M.D. program) at a Canadian university

Applicants who are accepted into SPRINT must be enrolled in a program with full time status during their participation in SPRINT (May 2019 to June 2020).

If you have any questions regarding eligibility contact Anik Schoenfeldt: anik.schoenfeldt@mail.mcgill.ca

PREPARATION AND REVIEW OF APPLICATIONS

Application procedure: The MS Society of Canada uses a web-based apply online process for the submission of applications. This can be accessed through <https://www.mscanadagrants.ca>. Please review the SPRINT Online Application Guidelines for complete instructions. All candidates are required to use this website for completion and submission of applications.

Deadline: The deadline for completed applications is **February 5, 2019 at 4:00 pm EST**. Incomplete applications and/or applications that arrive after the deadline will not be accepted. The hours of the endMS Research and Training Network and MS Society of Canada's administrative and technical support for funding inquiries are Monday to Friday from 9:00 am to 4:00 pm EST. All application inquiries must be directed to msresearchgrants@mssociety.ca.

SELECTION PROCESS

Participation in SPRINT is based on a competitive application process. Applications will be reviewed by the endMS Peer Review Committee and selected based on many factors including: the added value of the program to the applicant over and above their current training program, reference letters, education and research experience, publications, as well as where they see themselves in 5-10 years' time.

Anticipated Notice of Decision: end of March 2019

TERMS AND CONDITIONS

SPRINT trainees are expected to:

- Participate in the next two consecutive endMS Summer Schools.
- Participate in an interdisciplinary learning project (approximately 8-10 hours per month).
- Meet and establish a schedule with their SPRINT mentor to discuss their progress and obtain feedback.
- Participate in face to face team meeting(s).
- Participate in the SPRINT evaluation process which aims to provide information to enhance the program and assess its impact.
- Present on their interdisciplinary learning project at the 2020 endMS Summer School.
- Complete brief program progress reports.
- Keep the endMS Program Manager apprised of any changes to their contact information.

SPRINT participants who do not meet the terms and conditions may be asked to leave the program.

SPRINT Alumni

Follow-up on SPRINT trainees after they graduate from the program is an important part of the program evaluation and thus trainees are urged to keep the endMS Education and Training Office apprised of their contact information after completing the program.

Go to our [website](#) to view past editions of the Spotlight on the Future newsletters as well as the recent [edition](#) including interviews with SPRINTers, mentors and alumni updates.

Feedback received from former SPRINTers about their experience in the program:

“It helped me to better understand the very different ways that a disease affects a persons’ life. It’s not just the physical aspect, but all the social implications. This experience has given me a better perspective on the kind of research I would like to do.”

“The interdisciplinary projects encourage trainees to explore MS-related topics outside of their own field with an interdisciplinary group of colleagues. This interaction fosters the development of a variety of skills that are crucial to conducting meaningful research, and that can often not be obtained in individual academic programs.”

“Participating in SPRINT was a logical next step in my training as I had been involved in MS research for several years, I was excited to learn about the different dimensions of multiple sclerosis addressed outside of my own field of study and to work with people from other disciplines who were approaching MS research with a unique perspective.”

“Nowhere else could you enroll in a yearlong adventure especially designed to enhance essential research skills. Through communication workshops, networking activities and multidisciplinary projects, the program provides young researchers with the tools they need to promote their research and to make a significant contribution to the global scientific MS community.”

“The overall experience was remarkable. Attending two endMS Summer Schools gave me a nice overview of the state of MS research in Canada both from a fundamental and clinical perspective. I also learned about many different aspects of the disease and developed an integrated vision of my current research interests.”

“I think our project has the potential to really help people with MS in their daily lives...I have not only gained confidence in my ability to see a project through to completion, present in public and work as a team but have also developed potential research collaborations. I feel honoured to be a part of this unique network.”

Travel Awards

Travel for SPRINT Team Project Meeting: Funding will be provided for trainees to attend **two** small group mentored meetings to work on their SPRINT interdisciplinary team project.

Travel Awards for Summer School: Travel awards will be provided for SPRINT trainees to attend the 2019 and 2020 endMS Summer Schools.

The maximum amount of the award, to attend the 2019 endMS Summer School, being hosted in Calgary, will be determined based on the location from which they travel. These awards are to reimburse participants for the cost of airfare and ground transportation to and from airports and will be provided upon submission of expense reports by participants after Summer School. Participants will only be reimbursed for expenses for which they provide original receipts. If total expenses are lower than the maximum available award, participants will be reimbursed only for the expenses submitted. Applicants accepted into the program will be provided with detailed travel expense guidelines. Any additional travel costs incurred by participants will not be reimbursed by the endMS National Training Program.

Shared accommodation (pods of 2 single rooms with shared bathroom) for participants arriving from outside Calgary, meals provided during the program and course materials for all participants will be arranged by the endMS National Training Program. These costs are covered and do not count toward the maximum travel awards below.

The following table outlines the maximum amount of the awards to be provided to participants traveling from the following locations. The differences in these awards are due to the differences in travel costs from different locations. These awards are based on the lowest available flight/train costs as of November 2018.

| Closest major city to participant's institution | Maximum Travel award amount |
|--|------------------------------------|
| Calgary, AB | \$100 |
| Edmonton, AB | \$425 |
| Fredericton, NB | \$825 |
| Halifax, NS | \$825 |
| Kingston, ON | \$800 |
| Lethbridge, AB | \$475 |
| London, ON | \$875 |
| Montreal, QC | \$750 |
| Ottawa, ON | \$700 |
| Quebec City, QC | \$875 |
| Regina or Saskatoon, SK | \$475 |
| Sherbrooke, QC | \$850 |
| St. John's, NL | \$975 |
| Toronto, ON | \$700 |
| Vancouver, BC | \$475 |
| Winnipeg, MB | \$550 |

Any questions regarding the program or these guidelines should be directed to:
 Ms. Anik Schoenfeldt, Program Manager, Email: anik.schoenfeldt@mail.mcgill.ca,
 Phone: 1-877-288-2570 / 514-843-1442