

Department of Neurology and Neurosurgery Clinical and Clinical Research Fellowship

TWO YEAR FELLOWSHIP

Type of Fellowship: **Neuromuscular Medicine**

Name of the Fellowship Supervisors: Dr. Erin O’Ferrall (main contact), Dr. Bernard Brais & Dr. Colin Chalk

Fellowship Information:

- Number of fellowship positions requested: 1-2
- Duration: 2 year
- Hospitals involved in training:
 - Montreal Neurological Hospital (main site)
 - Montreal General Hospital
 - Montreal Children’s Hospital
 - Royal Victoria Hospital, Glen site

Candidates must secure funding. Please see opportunities for funding through the MNI here: <https://apps.mni.mcgill.ca/clinicalawards/awards-unlocked.php>. Additional funding opportunities may be available through <https://www.cnsfederation.org>.

Description of Fellowship

The Neuromuscular group at McGill University was originally established by the late Dr. George Karpati, a world recognized expert in Neuromuscular Disease. Today the Neuromuscular group at the Montreal Neurological Institute and Hospital (MNH) is co- directed by Dr. B. Brais and Dr. E. Shoubridge and continues to be an integrated clinical and basic science environment for research and clinical training in Neuromuscular Diseases. The Neuromuscular clinic and EMG laboratory at the MNH, the Neuropathy and Myasthenia Clinics at the Montreal General Hospital and the Neuromuscular Clinic and EMG laboratory at the Montreal Children’s Hospital are provincial referral centers for neuromuscular patients and provide excellent exposure to patients with neuromuscular diseases.

The Neuromuscular Fellowship provides the trainee with exposure to patients with diseases of the nerve, neuromuscular junction and muscle and will be under the supervision of Drs. Chalk, Brais and O’Ferrall with the participation of other leading clinicians such as Drs. Massie, Gendron, Oskoui, and Poulin. Dr. Colin Chalk is the director of the Neuropathy and Myasthenia clinics at the Montreal General Hospital. Dr. Bernard Brais is a Neurogeneticist with expertise in the clinical and genetic aspects of neuromuscular diseases. Dr. Erin O’Ferrall, in conjunction with two neuropathologists, Drs. Jason Karamchandani and Joshua Sonnen, will provide exposure to muscle and nerve pathology as part of the fellowship. Dr. Massie is an expert in Motor Neuron Diseases and Diseases of the Peripheral Nerves. Dr. Gendron is the director of the EMG

laboratory at the MNH. Drs. Oskoui and Poulin are Pediatric Neurologists with expertise in Neuromuscular Disorders. They offer a monthly multidisciplinary Neuromuscular Clinic. Dr. Poulin also performs EMG evaluations for pediatric patients.

This fellowship offers the opportunity to train in the EMG departments of the MNH, MCH, RVH and MGH. The fellow may wish to obtain EMG certification through the Canadian Neurological Sciences Federation (see website for details:

https://www.cnsfederation.org/societies/society/canadian-society-of-clinical-neurophysiologists/5_).

In addition, within the environment of the Neuromuscular Group at the MNI/MNH, there are excellent opportunities for participating in basic science research on neuromuscular diseases. As part of the fellowship training, the fellow may wish to develop clinical or basic science research projects in accordance with his/her career plans that will lead to publications and presentations at international meetings.

Academic Facilities

In addition to the fellowship supervisors, the Montreal Neurological Hospital, the Montreal General Hospital and McGill University host a number of excellent clinical and basic science researchers who may collaborate with the fellow. The Rare Neurological Disease Research Group at the MNI is directed by Dr. B. Brais and includes the following researchers: E. Shoubridge, G. Armstrong, H. McBride, H. Durham, K. Hastings, and E O'Ferrall (please see website for up to date list:

https://www.mcgill.ca/neuro/people/field_mprofile_research_areas/rare_neurological_diseases).

Fellow Duties and Responsibilities

The fellow will attend Neuromuscular, Neurogenetics, Neuropathy, EMG and Myasthenia Gravis Clinics each week. There are no on-call or in-patient duties. The fellow is expected to attend Grand Rounds and Neuromuscular Journal club meetings. The fellow is also encouraged to participate in the pre-operative muscle biopsy evaluations. She or he will participate in the bi-weekly neuromuscular rounds where muscle and nerve biopsies will be reviewed with the neuropathologist and the geneticist. As part of the first year of fellowship training the fellow should develop research projects. During the second year of fellowship training, a greater emphasis is placed on the completion of the research project that will lead to publication in a peer-reviewed journal and oral or poster presentations at international meetings.

Curriculum

In clinic or EMG, the fellow will evaluate 2-4 patients per half day of clinic. The patient population will vary depending on the clinic. In the Neuromuscular Clinic approximately 50% of the patients have muscle or neuromuscular junction disorders and 50% of the patients have primary nerve disorders. In the Neurogenetics clinic the fellow will learn to use genetic testing and other genetic technologies for the diagnosis, genetic counseling and gene discovery of neuromuscular diseases. The fellow will also be expected to attend or give presentations at the academic rounds (described above) including the regular neuromuscular journal club. During the second year of fellowship, the fellow will place a stronger emphasis on the completion of the research project.

Evaluation

The fellow will be given regular feedback (both in person and in writing) every 3 months. There is no final examination but the fellow may wish to obtain certification in EMG through the Canadian Neurological Sciences Federation.