

Department of Neurology and Neurosurgery Clinical and Clinical Research
Fellowship Application Form

Type of Fellowship

EEG/Epilepsy Fellowship.

Name of Fellowship Supervisor

Dr. Bernard Rosenblatt

Fellowship Information

Two positions are requested.

Montreal Children's Hospital and Montreal Neurological Hospital with 80% of the time being spent at the Montreal Children's. This is a 2 year fellowship concentrating on EEG in the first year and epilepsy research in the second year.

Fellowship would include training in the acquisition and interpretation of EEGs across the age range from neonate to adolescence. The trainee will be expected to know the basic underlying neurophysiology and the neuroanatomy of the electroencephalogram and have an understanding of the basic mechanisms of the epilepsies. Normal features of the EEG from the neonatal period to adolescence and adulthood will be reviewed. EEG abnormalities in epileptic disorders, structural lesions of the brain, neurometabolic disorders, etc will be reviewed. The candidate will be given exposure to EEG in-patient monitoring both with surface electrodes and invasive recordings using GRIDS. Use of EEG in the intensive care unit for patients with coma and the role of EEG and evoked potentials in comatose patients and prediction of neurodevelopmental outcome in high-risk neonates and 24 hour home EEG monitoring.

The trainee will also have exposure to the epilepsy clinics with understanding of seizures and epilepsy across the age range from neonate through adolescence. Intractable epilepsy and evaluation of candidates for epilepsy surgery, ketogenic diet and VNS implantation will be reviewed. Pre-operative assessment including the use of sphenoidal electrodes,

GRIDS and localization studies and intraoperative monitoring with corticography and SEPs will be reviewed.

Research may include work in evoked potentials, EEG, EEG monitoring and clinical epilepsy outcome studies.

Names of the Teaching Faculty

- Dr. B. Rosenblatt - Electroencephalography, Evoked Potentials.
- Dr. F. Andermann – Electroencephalography.
- Dr. B. Zifkin – Electroencephalography.
- Dr. C. Poulin – Electroencephalography, EMG.
- Dr. M.E. Dilenge – Electroencephalography, Evoked Potentials.

The teaching faculty in the Department of Clinical Neurophysiology has a broad range of experience in electroencephalography, evoked potentials and electromyography. The department has expertise in clinical care, teaching and research that goes over many years and covers a broad area of clinical neurophysiology and epilepsy.

Two members of the department have been and currently are child neurology training program directors. Dr. B. Rosenblatt has supervised numerous fellows in electroencephalography and evoked potentials in addition to having a number of successful graduate students at the Masters and Ph.D. level.

The Montreal Children's Hospital has an active epilepsy surgery program which will afford fellows superior experience for evaluating and treating children with epilepsy. The selection and clinical neurophysiological evaluation of children for epilepsy surgery is a major focus of the program. In addition, there is an active vagal nerve stimulation program and ketogenic diet program.

Academic Facilities

The EEG and Clinical Neurophysiology fellowship ties in with the child neurology training program with availability of academic half day, EEG rounds and epilepsy conferences. There is an active clinical research program available at the Montreal

Children's Hospital offering resources for fellowship trainees doing a clinical research program. In addition, fellows are encouraged to take the McGill epidemiology program for residents and fellows if this is appropriate to their academic needs.

The Division of Pediatric Neurology at the Montreal Children's Hospital has an extensive library of material pertinent to the EEG and Clinical Neurophysiology program.

Fellow Duties and Responsibilities

The EEG Clinical Neurophysiology/Epilepsy fellows participate in appropriate clinics at the Children's Hospital and read and report on EEGs. There are no on call requirements during this fellowship.

The fellows will be supervising residents doing rotation through the EEG lab from adult neurology or child neurology who spend a month at a time learning some basics of electroencephalography. The fellows will also be organizing epilepsy conference and provide teaching to the pediatric residents, pediatric neurology residents and adult neurology residents on epilepsy and EEG.

Fellows doing a year of EEG at the Montreal Children's Hospital generally do 2-3 months at the Montreal Neurological Hospital to learn adult EEG. The second year will be done through the Montreal Children's Hospital. The fellows will participate in the epilepsy clinic. The Department of Clinical Neurophysiology and Director, Dr. Bernard Rosenblatt with staff as noted above have two nurses that cover the epilepsy patient in addition to technical and secretarial support.

The fellow would be expected to produce 1-2 presentations at Neurology or Child Neurology Meetings with at least one publication to come out of these.

Evaluation

The fellow is evaluated on a daily basis and given feedback as he learns to read EEGs and see patients with various staff members. We will use monthly evaluations using the child neurology resident evaluation form. The final evaluation to be given at the end of each year.



Department of Neurology and Neurosurgery EEG and Epilepsy Fellowship (General and Specific Objectives)

1. Medical Expert/Clinical Decision-Maker

General Requirements

- Demonstrate diagnostic and therapeutic skills for ethical and effective patient care.
- Access and apply relevant information to clinical practice.
- Demonstrate effective consultation services with respect to patient care, education and legal opinions.

Specific Requirements

Provide scientifically based, comprehensive and effective diagnosis and management for patients with epilepsy.

Clinical:

For a patient with epilepsy or allied disorder, the resident will be able to:

- Obtain a complete neurological history from adults and children obtaining a collateral history where necessary
- Perform an appropriate physical examination.
- Determine whether a patient's symptoms and signs are the result of a disorder related to epilepsy.
- Formulate an appropriate localization, differential and provisional diagnosis of epilepsy if appropriate.
- Outline an appropriate plan of laboratory investigation.
- Outline an appropriate therapeutic plan.
- Exhibit appropriate clinical judgment in outlining a differential diagnosis and an investigative and therapeutic plan, taking into account matters such as the patient's age, general health, risk and cost of investigative procedures, risk and cost of therapeutic interventions, and epidemiology of the disease.

Technical Skills

- To learn/review detailed, practical anatomy of epilepsy.
- Other technical skills related to fellowship in EEG.

Knowledge

- Acquire and understand the neuroanatomic principles and pathological substrates of EEG and epilepsy.
- Become familiar with the neurophysiological principles, the basic mechanisms related to epilepsy.
- Learn the major categories or classifications related to epilepsy.
- Learn clinical neuropharmacology related to epilepsy.
- Acquire expertise in the decision making related to epilepsy.

2. Communicator

General Requirements

- Establish therapeutic relationships with patients/families.
- Obtain and synthesize relevant history from patients/families/communities.
- Listen effectively.
- Discuss appropriate information with patients/families and the health care team.

Specific Requirements

Communicate effectively with patients, their families and medical colleagues (particularly referring physicians), and other health care professionals in both the inpatient and outpatient settings. The resident will:

- Communicate effectively and regularly with patients and their families.
- Be considerate and compassionate in communicating with patients and families, willingly provide accurate information appropriate to the clinical situation, with a reasonable attempt at prognosis.
- Learn to write concise reports of the clinical findings with conclusions and recommendations comprehensible to the non-specialist.
- Communicate effectively and appropriately with the nurses and paramedical personnel.
- When ordering investigative procedures, ensure there has been adequate communication about the patient with the person who will actually be doing and/or reporting the diagnostic study.

3. Collaborator

General Requirements

- Consult effectively with other physicians and health care professionals.
- Contribute effectively to other interdisciplinary team activities.

Specific Requirements

Be an effective teacher of other physicians (including medical students and house officers), other health care personnel, and patients. The resident will:

- Provide instruction to medical students and more junior physicians at a level appropriate to their clinical education and professional competence.
- Willingly share knowledge with others with whom they are associated, thus ensuring the most effective delivery of health care to patients.

4. Manager

General Requirements

- Utilize resources effectively to balance patient care, learning needs, and outside activities.
- Allocate finite health care resources wisely.
- Work effectively and efficiently in a health care organization.
- Utilize information technology to optimize patient care, life-long learning and other activities.

Specific Requirements

Be proficient in professional skills related to the diagnosis and treatment of epilepsy.

Demonstrate the following professional skills in time management:

- Recognize that effective use of time depends upon punctuality.
- Recognize that effective use of time requires planning.
- Develop speed as well as accuracy in clinical skills.
- Reserve time for reading and keeping current with the neurological literature.
- Establish routines for carrying out regular activities and adhere to them.

Maintain complete and accurate medical records:

- Record and maintain a complete and accurate medical record for every patient seen; this record will include the patient's history and the findings on physical examination (including the neurological examination), a differential diagnosis, a provisional diagnosis, Effectively coordinate the work of the health care team: .
- Indicate, by the treatment plan, that for the optimal treatment of many patients with neurological disorder, a team approach is necessary -- members of the team may include nurses, rehabilitation personnel (physiotherapists, occupational therapists, speech therapists, etc.), psychologists, social workers, etc.
- Identify where an important role(s) can be played by disease focused lay groups with regard to helping the patient and/or family and to facilitate its happening.

5. Health Advocate

General Requirements

Identify the important determinants of health affecting patients.

Contribute effectively to improved health of patients and communities.

Recognize and respond to those issues where advocacy is appropriate.

Specific Requirements

Learn about community resources and related patient support groups; provide assistance to access programs (e.g. home care, occupational and physiotherapy, drug plans, application for nursing homes etc) and participate in their activities.

Educate, be able to generate and access information (e.g. printed material, video tapes web sites) and be available as a resource person to counsel patients effectively on neurological disorders.

Counsel patients on the importance of taking responsibility for their own well-being and recognize the important determinants predisposing to worsening of neurological status

Understand the role of national and international bodies (e.g. ILAE, American Epilepsy Society, AAN) in the promotion of neurological health, and the prevention, detection, and treatment of peripheral nervous system disorders.

6. Scholar

General Requirements

Develop, implement and monitor a personal continuing education strategy.

Critically appraise sources of medical information.

Facilitate learning of patients, house staff/students and other health professionals.

Contribute to development of new knowledge.

Specific Requirements

Be able to critically assess the neurological literature as it relates to patient diagnosis, investigation and treatment:

- Develop criteria for evaluating neurological literature.
- Critically assess the neurological literature using these criteria.
- Be familiar with the design of experimental and observational studies, especially randomized controlled trials.
- Be able to calculate absolute risk reductions, relative risk reductions and numbers needed to treat or harm.

Be able to participate in clinical or basic science studies as a member of a research team:

- Be able to describe principles of good research.
- Use the above principles, and be able to judge whether a research project is properly designed.
- Be prepared to present research findings to peers at local, national or international conferences.

7. Professional

General Requirements

Deliver highest quality care with integrity, honesty and compassion.

Exhibit appropriate personal and interpersonal professional behaviours with patients/families, peer residents and other health care professionals.

Practice medicine ethically consistent with obligations of a physician.

Specific Requirements

Demonstrate personal and professional attitudes consistent with a consulting physician role:

- Periodically review his/her own personal and professional performance against national standards set for the specialty.
- Be willing to include the patient in discussions concerning appropriate diagnostic and management procedures.
- Show appropriate respect for the opinions of fellow consultants and referring physicians in the management of patient problems and be willing to provide means whereby differences of opinion can be discussed and resolved.

Be willing and able to appraise accurately his/her own professional performances and show that he/she recognizes his/her own limitations with regard to skill and knowledge by appropriately consulting other physicians and paramedical personnel when caring for the patient.

Be willing and able to keep his/her practice current through reading and other modes of continuing medical education and develop a habit of maintaining current his/her clinical skill and knowledge base through continuing medical education.