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**FELLOWSHIP PROGRAM IN SLEEP MEDICINE**

**Name of Institution:** McGill University

**Location:** Royal Victoria Site, McGill University Health Centre

**Type of Fellowship:** Clinical

**Fellowship Program Director:**

Dr. R. John Kimoff  
Associate Professor of Medicine, Respiratory Division  
Director, MUHC Sleep Laboratory  
Rm L4.08 Royal Victoria Hospital

**Fellowship Co-ordinator:**

Ms. Christine DiIorio  
Rm L4.09 Respiratory Division, RVH  
514-934-1934, ext 36117; Fax 514-843-1695

**Parent Training Program:** Adult Respiriology

**Eligible trainees:** Physicians having completed specialty training in Respiratory Medicine. Those who have completed residency training in Neurology or Psychiatry are also eligible.

**Rationale:** Sleep Medicine is a rapidly expanding field, and there is a growing demand for practitioners with training and competency in sleep medicine. No Canadian certification in this discipline is yet available, although the Royal College of Physicians is actively pursuing this. However as of 2007, Sleep Medicine certification is available through the American Board of Internal Medicine. (Prior to this in the US, certification was in the form of a “Diploma” from the American Board of Sleep Medicine). Eligibility for the ABIM certifying exam requires a one-year multi-disciplinary sleep medicine fellowship of the type described here. Trainees in Respiratory Medicine now have to demonstrate proficiency in the management of respiratory sleep disorders, and sleep rotations are now a core element of Respiratory training programs. However to meet the demand for full competency in Sleep Medicine, some Respiratory trainees pursue a one-year Sleep Medicine fellowship. This therefore complements their previous training and prepares them for a practice profile involving multi-disciplinary sleep disorders. Trainees in Neurology and Psychiatry may similarly wish to develop multi-disciplinary competency in Sleep Medicine and choose to pursue Sleep Fellowship training.

**Fellowship Training Committee Members:**

Dr John Kimoff (Chair)  
Director MUHC Sleep Laboratory

Dr. Basil Petrof  
MUHC Respiratory Division  
Diplomate, American Board of Sleep Medicine

Dr Marta Kaminska  
MUHC Respiratory Division  
(New faculty recruit; recently completed sleep training)

Dr. Kevin Schwartzman (ex officio)  
Respiratory Division, McGill University Health Centre  
Residency Training Program Director, Adult Respiriology

**Teaching Faculty:**

Dr John Kimoff, M.D., F.R.C.P.(C.), ABIM-Certified: Sleep Medicine  
Associate Professor of Medicine, Respiratory Division  
Director, MUHC Sleep Laboratory  
Multi-disciplinary sleep disorders; research in pathophysiologic mechanisms of upper airway dysfunction in sleep apnea; cardiovascular interactions in sleep apnea; ambulatory management of sleep-disordered breathing.

Dr. Kateri Champagne, M.D., F.R.C.P.(C.), Diplomate, American Board of Sleep Medicine.  
MUHC Respiratory Division – MCI, Respiratory Epidemiology Group (Part-time); Multi-disciplinary sleep disorders; clinical epidemiology; clinical & research interest in sleep-disordered breathing and materno-fetal health.

Dr Marta Kaminska, M.D., F.R.C.P.(C.). MUHC Respiratory Division.  
MUHC Respiratory Division; Multi-disciplinary sleep disorders; clinical & research interest in neuromuscular disorders and sleep

Dr. Andy Nguyen, M.D., F.R.C.P.(C.), ABIM-Certified: Sleep Medicine. MUHC Respiratory Division – RVH (Part-time); Medical Director Sleep Services, CH Pierre Boucher.  
Multi-disciplinary sleep disorders. Research interest in sleep apnea interaction in male factor infertility.

Dr. Linda Ofiara, M.D., F.R.C.P(C.), MUHC Respiratory Division; Dept of Oncology.  
Respiratory sleep disorders; interest in sleep disorders in cancer patients.

Dr. Basil Petrof, M.D., F.R.C.P(C.), Diplomate, American Board of Sleep Medicine. MUHC Respiratory Division and Meakins-Christie Labs. Multi-disciplinary sleep disorders; neuromuscular disorders and sleep; basic research in respiratory muscle pathobiology.

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Dr. Arnold Zidulka, M.D., F.R.C.P(C.). MUHC Respiratory Division: Respiratory and Sleep Disorders; Medical Director, Programme Nationale d'Aide Ventilatoire à Domicile (PNAVD – Home Ventilation)

Dr. Diane Boivin, M.D., Ph.D., Associate Professor  
Director Centre for Study and Treatment of Circadian Rhythms  
Douglas Mental Health University Institute  
Clinical and research interest in human circadian disorders.

Dr. Eva Libman, Ph.D.  
Clinical Psychology Unit, Jewish General Hospital  
Sleep disorders in the elderly; behavioural management of sleep disorders, insomnia.

### **Academic Facilities:**

This program is based in the Sleep Laboratory of the MUHC (Royal Victoria site) and the MUHC Sleep Clinics (RVH and MCI sites) where the Fellow will work for the entire year. Training is also provided in out-patient clinics at the JGH (Dr. Libman) and Douglas Hospitals (Dr. Boivin); this exposure may vary in duration but typically involves at least 6 -12 clinics per year.

*MUHC Sleep Laboratory:* This is a full-service 6-bed polysomnography laboratory which functions 6-7 nights per week, and conducts daytime testing (Multiple Sleep Latency and Maintenance of Wakefulness tests as well as diagnostic and therapeutic polysomnography) 3-4 days per week. The Laboratory is also the base of operations for an ambulatory monitoring program which conducts 6 home studies 5 nights per week on outpatients, and is the centralized facility for in-patient respiratory sleep recordings performed in hospitalized patients at the other adult MUHC sites (MGH, MCI, MNI). A total of approximately 2,700 studies are conducted per year. The Laboratory is staffed by a Chief technologist, 6 polysomnographic technologists and one home recording technologist. The Laboratory houses printed and electronic textbooks and other training materials, teaching files and full computer facilities for learning. Fellowship trainees receive training in all aspects of sleep recording and analysis, acquiring detailed technical proficiency including Laboratory trouble-shooting, all aspects of respiratory and other interventions performed in the Laboratory and detailed proficiency in the scoring and interpretation of actigraphy, ambulatory cardiorespiratory recordings and complete diagnostic and therapeutic polysomnographic recordings. Trainees therefore receive all the preparation required to establish and operate a sleep recording service.

*Out-patient Sleep Clinics:* Weekly sleep clinics are held at the RVH (Wednesdays, Drs. Kimoff, Petrof, Nguyen) and at the MCI Thursdays (Drs. Champagne, Kaminska, Kimoff, Ofiara, Zidulka). Fellows participate in the evaluation and management of all aspects of clinical sleep disorders, interacting with physician, nursing and respiratory therapy staff.

*In-patient Sleep Medicine Consultations:* Sleep fellows are responsible for Sleep Medicine consultations on in-patients at the RVH and MNH. For special cases, consultation may be performed at the MGH or MCI. These are reviewed with the responsible Sleep MD on rotation.

**Fellow Duties and Responsibilities:**

*Scholarly Activities:* A systematic reading program in Sleep science and medicine is established with the Training Director. Fellows participate in the monthly sleep physician group CME session. Attendance at special seminars, invited lectures and other sessions (eg. local sleep conferences) is required as specified by the Training Director. Trainees are now also required to attend a monthly videoconference of the Harvard Sleep Grand Rounds.

*Teaching responsibilities:* Fellows prepare and present clinical or laboratory-related topics at the monthly Sleep Laboratory technical meeting. Two formal presentations at Respiratory or Internal Medicine Rounds will be required during the year. Sleep Fellows will also participate in the teaching and supervision of Pulmonary Fellows during core one-month Sleep rotations, and will contribute to other teaching activities within the Laboratory.

*Call Duty:* Sleep Medicine fellows do not take in-house call and are responsible for in-patient consultation only on weekdays. Sleep fellows are the first to be called from the Sleep Laboratory technical staff at night, and discuss issues as required with the attending staff on call of the week for the Lab. Fellows may be required to attend the Laboratory at night to conduct specialized intervention studies; it is expected that fellows will spend 2 – 4 nights per month in the Laboratory as part of their training experience.

**Evaluation:** Written evaluation form in CanMEDS format will be completed by faculty supervisors: at the end of every 4-week rotation when the fellow completes a focused rotation (e.g. insomnia clinic at JGH), otherwise at minimum every 2 rotations. The training director will provide a verbal performance review every 3 months, with formal 6-month summative written evaluations by the training director on the standard McGill form. These will reflect discussion of all evaluations to date by the Fellowship Training Committee. The Fellow will be required to submit written evaluation of supervisors and the training program at 3 monthly intervals.

**Sleep Medicine Fellowship Objectives:**Medical Expert:

1. The fellow will be able to obtain a history and perform a physical exam which are pertinent to the evaluation of sleep disorders including insomnia, excessive daytime sleepiness, and abnormal nocturnal behaviours.
2. The fellow will demonstrate knowledge of the epidemiology, pathophysiology, prevention, clinical presentation, laboratory evaluation, treatment and prognosis of:
  - respiratory sleep disorders including: obstructive sleep apnea, central sleep apnea including Cheyne-Stokes respiration and nocturnal hypoventilation;
  - non-respiratory sleep disorders including: insomnia, narcolepsy, periodic limb movement disorder, REM sleep behaviour disorder, and other parasomnias

3. The fellow will demonstrate an ability to manage all forms of sleep-disordered breathing as well as non-respiratory sleep disorders insomnia, narcolepsy, periodic limb movement disorder, REM sleep behaviour disorder, and other parasomnias. Competency in pharmacotherapy as well as basic aspects of behavioural therapy of non-respiratory sleep disorders will be demonstrated.
4. The fellow will demonstrate an understanding of the indications for a Sleep Medicine specialist to refer complex cases not in his or her primary area of expertise to other appropriate consultant (eg. Recognition of major affective disorder and referral to a psychiatrist in the case of a respiratory-trained sleep specialist; referral of patient with nocturnal seizure activity to a seizure neurologist in the case of a non-neurology trained sleep specialist, etc.).
5. The fellow will demonstrate competency in all technical aspects of sleep testing procedures, including patient instrumentation, signal acquisition and processing, Laboratory troubleshooting including the recognition and correction of recording artifacts, and the scoring of raw and summary data.
6. The fellow will demonstrate an ability to score and interpret actigraphy, cardiorespiratory ambulatory studies and polysomnographic studies. Competency in polysomnography will include identification of non-REM and REM sleep stages and microarousals from sleep, recognition of normal or disturbed sleep architecture, identification of abnormal waveforms or neurologic events including seizure activity, recognition and scoring of periodic limb movements, and identification of respiratory events including apneas, hypopneas, upper airway resistance events and hypoventilation.
7. The fellow will demonstrate knowledge of the relative strengths and weaknesses and indications for selection of: ambulatory vs. polysomnographic testing, actigraphy and Multiple Sleep Latency and Maintenance of Wakefulness testing.
8. The fellow will demonstrate knowledge of theoretical and practical aspects of the use of all forms of positive airway pressure therapy (continuous, self-adjusting, Bi-Level, servo ventilation) and oxygen therapy in the treatment of respiratory sleep disorders.

#### Communicator

1. The fellow will demonstrate the proper attitudes, interpersonal skills and strategies to behave as an effective consultant and learn how to provide effective verbal and written consultations.
2. The fellow will be able to communicate his/her clinical impression concerning the nature of the disease process and its implications to the patient and his/her family in a clear and compassionate way that takes into account the patient's cultural values and education.
3. The fellow will be able to prepare patients for diagnostic and therapeutic interventions for sleep disorders.
4. The fellow will be able to communicate his/her clinical impression in a clear and concise fashion in both the written and oral forms to the referring physician and to other medical personnel.

5. The fellow will be able to effectively communicate the findings of sleep testing procedures in oral and written forms.

#### Collaborator

1. The fellow will demonstrate understanding of the role of a multi-disciplinary approach to the diagnosis and therapy of sleep disorders.
2. The fellow will demonstrate the ability to appropriately interact with sleep technologists, respiratory therapists, nurses, clerical staff, dentists, psychologists and physicians in a variety of disciplines including Neurology, Otolaryngology, Psychiatry, Cardiology, Endocrinology and others, to ensure a complete approach to patient management.

#### Manager

The fellow will demonstrate knowledge of the cost of various sleep investigations, the strengths and limitations of each, the limitations of available resources, and how diagnostic and therapeutic resources can best be matched to the demands of the clinical context.

#### Health Advocate

1. The fellow will demonstrate knowledge of how to promote healthy sleep habits among patients and promote an awareness of symptoms of inadequate sleep, disrupted sleep and excessive daytime sleepiness.
2. The fellow will demonstrate an understanding of the importance of public education and health advocacy in the areas of sleep hygiene, and recognition and management of sleep disorders.
3. The fellow will demonstrate a gentle, caring and respectful attitude towards the patient at all times with attention to patient's rights and confidentiality and to patient comfort.

#### Scholar

1. The fellow will demonstrate self-directed learning and a commitment to scholarship, by following both a prescribed reading program, and reading around specific case material in the Sleep Clinic and Laboratory.
2. The fellow will demonstrate knowledge of how to access printed and electronic resources in sleep disorders medicine.
3. The fellow will give presentations at the monthly Sleep Laboratory staff development meeting, and receive formal feedback on this presentation.

4. The fellow will demonstrate a basic understanding of current research priorities and methodologies in sleep disorders medicine, and how these apply to critical reading of the medical literature.
5. The fellow will participate in a clinically-oriented research or quality-assurance project, and receive formal feedback on this.

Professional

1. The fellow will, at all times in dealing with colleagues, allied health care staff and patients, demonstrate appropriate professional and personal behavior.
2. The fellow will demonstrate knowledge of bioethical principles when dealing with patients and their families.