

## **Organized by / Organisée par**

Canadian Sleep Society / Société canadienne du sommeil  
Dr. Joseph De Koninck, President / Président  
Dr. Roger Godbout, Vice-President (Research) / Vice-président (recherche)  
Sleep/Wake Disorders Canada / Affections du Sommeil/Eveil Canada  
Dr. Ed Gibson, President / Président  
Mrs. Maggie Wheelock, Executive Director / Directeur exécutive  
In Collaboration with Fondation Sommeil / En collaboration avec Fondation Sommeil

## **Scientific committee / Comité scientifique**

Dr. Roger Godbout (Chair / Président)  
Université de Montréal

Dr. Kenneth Campbell, University of Ottawa	Dr. Rachel Morehouse, Saint John Regional Hospital, NB
Dr. Helen Driver, Kingston General Hospital	Dr. Charles Morin, Université Laval
Dr. Marie Dumont, Université de Montréal	Dr. Robert Ogilvie, Brock University
Dr. Meir Kryger, St. Boniface Hospital, Winnipeg	Dr. Colin M. Shapiro, Toronto Hospital Western Division
Dr. Alistair MacLean, Queen's University	Dr. Carlyle Smith, Trent University

## **Local organizing committee / Comité local d'organisation**

Dr. Joseph De Koninck (Chair / Président)  
University of Ottawa

Dr. Kenneth Campbell, University of Ottawa	Dr. Francine Roussy, Ottawa Hospital
Mrs. Anik Gosselin, University of Ottawa	Mrs. Mélanie St-Onge, University of Ottawa
Mrs. Kathy Lutley-Borland, Ottawa Hospital	Mr. Carlos Woolcott, Ottawa Chapter Leader, SWDC
Mrs. Trixi B. Magyar, University of Ottawa	

## **Continuing medical education / Cours d'enseignement médical continu**

Dr. Roger Godbout, Université de Montréal	Mrs. Kathy Lutley-Borland, Ottawa Hospital
Dr. Judy Leech, Ottawa Hospital	Dr. Jamie MacFarlane, Centre for Sleep and Chronobiology, Toronto

## **Workshops / Ateliers**

Dr. Ed Gibson, President / Président, SWDC	Dr. Roger Godbout, Vice-President (Research), CSS / Vice-président (recherche), SCS
Mrs. Maggie Wheelock, Executive Director / Directrice Exécutive, SWDC	Mr. Carlos Woolcott, Ottawa Chapter Leader, SWDC

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## **WELCOME TO 2001 CANADIAN SLEEP ODYSSEY BIENVENUE À 2001 L'ODYSSÉE CANADIENNE DU SOMMEIL**

Welcome to the first all-Canadian national conference on sleep and sleep disorders. During those two historic dates, the broadest representation of scientists, professionals, technologists, students and the interested public will meet and interact with the ultimate goal of fostering knowledge about this important third of our lives. This event has been prepared by the Canadian Sleep Society (CSS) and Sleep/Wake Disorders Canada (SWDC) with the cooperation of Fondation Sommeil (Québec). We hope that participants will realize the breadth of the Canadian contribution to sleep research and to the treatment of sleep disorders and will take this opportunity to create even more productive links for the benefit of the health and well being of Canadians.

We are pleased to honour Dr. Roger Broughton, founding President of CSS and a pioneer of sleep research and sleep disorders treatment in Canada. We are also grateful to Drs Harvey Moldofsky and Jacques Montplaisir, two Canadian leaders in sleep research, who have both agreed to present a keynote address. We also thank our Major Sponsors, Servier Canada, Draxis Pharmaceutica and Mallinckrodt and other sponsors for allowing us to give a national stature to this meeting.

Thank you all for joining us and enjoy the conference!

Joseph De Koninck, President, CSS  
Edward Gibson, President, SWDC

Bienvenue à la première conférence nationale canadienne sur le sommeil et les troubles du sommeil. Durant ces deux journées historiques, chercheurs, professionnels, technologues, étudiants et membres du grand public se rencontreront et interagiront dans le but ultime de faire avancer nos connaissances sur cet important tiers de notre vie. Cet événement a été préparé par la Société Canadienne du Sommeil (SCS), Affections du sommeil/éveil Canada (ASEC), avec la participation de Fondation Sommeil (Québec). Nous espérons que les participants se rendront compte de l'importance de la contribution canadienne dans la recherche sur le sommeil et les troubles du sommeil et profiteront de cette occasion pour établir de nouveaux liens pour le bien-être et la santé des canadiens et canadiennes.

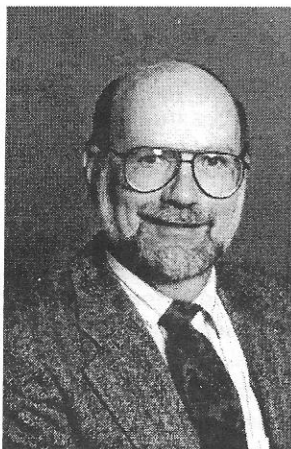
Nous sommes heureux d'honorer le Dr Roger Broughton, président fondateur de la SCS et pionnier de la recherche et du traitement des troubles du sommeil au Canada. Nous sommes également très reconnaissants envers les Docteurs Harvey Moldofsky et Jacques Montplaisir, chefs de file canadiens dans le domaine du sommeil, qui ont accepté de donner une conférence.

Nous remercions également nos principaux commanditaires, Mallinckrodt, Servier Canada et Draxis Pharmaceutica ainsi que nos autres commanditaires. Leur appui nous a permis de donner une dimension vraiment nationale à cette rencontre.

Merci à tous de s'être joints à nous et bonne conférence!

Joseph De Koninck, Président, SCS  
Edward Gibson, Président, ASEC

## KEYNOTE SPEAKERS / CONFÉRENCIERS PRINCIPAUX



**Roger Broughton, MD, PhD, FRCPC**  
**Honorary President / Président d'honneur**

Dr. Broughton graduated in medicine from Queens University in 1960 and has been active in sleep research and in sleep medicine since 1962, when he began a 2-year training period with Henri Gastaut in Marseilles, France. From 1964-1968 he was at the Montreal Neurological Institute and since 1968 has been at the University of Ottawa in the Division of Neurology, Department of Medicine, with cross-appointments in the Department of Cellular and Molecular Biology (previously Pharmacology) and in the School of Psychology. He has supervised the thesis work of over 15 graduate students and has hosted visiting research or clinical fellows (including 6 professors on sabbatical) from a number of countries.

His research has covered many aspects of normal sleep including the effects of sleep deprivation on performance, aspects of napping and the 2/day rhythm of sleep/wake regulation. Clinical studies have been on the topics of sleep-related movement disorders, epilepsy, sleep apnea, parasomnias (sleepwalking, sleep terrors, confusional arousals), narcolepsy (socio-economic impact, sleep abnormalities, treatment by gamma-hydroxy

butyrate and by modafinil) and excessive daytime sleepiness (performance effects, pupillometry, event related potentials, quantified EEG). He has authored or edited 11 books, published extensively in peer reviewed journals and written chapters in standard textbooks on sleep and its disorders. He was a Career Investigator of the Medical Research Council of Canada from 1968-1997. Dr. Broughton opened Canada's first sleep medicine clinic and (with Dr. M. Mamelak, Toronto) co-initiated the Canadian Association for Narcolepsy which later evolved into Sleep/Wake Canada.

Dr. Broughton is past president of the Association for the Psychophysiological Study of Sleep (1972-1975), founding president of the Canadian Sleep Society (1986-1988), and has had numerous other society responsibilities including membership in the core steering committee for the International Classification of Sleep Disorders. He is an honorary member of medical or scientific societies of Brazil, Latin America, the Czech Republic, Cuba, Poland and the USA and is a recipient of seals of the University of Akita, Japan and of the University of Bologna. In 1997 he received the William C. Dement Award of the American Sleep Disorders Association for lifetime academic achievement in the field.

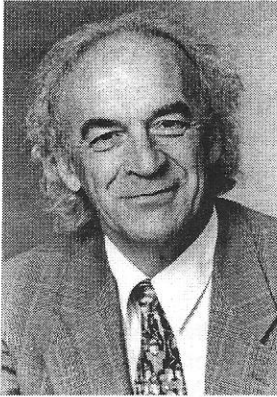


**Harvey Moldofsky, MD, FRCPC**

A native of Toronto, Canada, Harvey Moldofsky earned his M.D. in 1959, his Diploma in Psychiatry in 1963 and his Fellowship in Psychiatry in 1966 from the University of Toronto. With the aid of the R.S. McLaughlin Traveling Fellowship he continued his neurophysiological research during 1970-1971 at the University of California Langley Porter Neuropsychiatric Institute in San Francisco. He is a Fellow of the American Psychiatric Association. He has received many local, national and international awards and honours. He has served on the executive of various national and international scientific and professional societies. He has been a visiting professor to many universities and institutions, as well as an invited speaker to national and international scientific conferences in Canada, United States, Brazil, Argentina, various European countries, Israel, Australia, Hong Kong and Japan. In honour of his contributions, in 1989, his friends and associates established *The Dr. Harvey Moldofsky Scholarship for Psychiatric/Neuroscience Research* that is awarded annually to a medical student of the University of Toronto by the Faculty of Medicine Council, on the recommendation of the Undergraduate Awards Committee.

Throughout his career, he has been especially interested in understanding the inter-relationship of brain and behaviour in various medical and psychiatric illnesses in adults and children: chronic pain, fatigue and depression, and their treatment, various primary sleep disorders and sleep-related medical and psychiatric disorders. He is the author and co-author of numerous scientific publications. Lately, his physiological interests have focused upon neuroimmune and neuroendocrine mechanisms in circadian sleep-wakefulness. These sleep-related functions have been the subject of recent studies of cosmonauts and astronauts who have lived for four to six months on the MIR space station.

Dr. Harvey Moldofsky is a professor of Psychiatry and Medicine at the University of Toronto. He is currently the founding Director of the University of Toronto Centre for Sleep and Chronobiology. He serves as the Medical Director of the Sleep Clinic of the Centre for Sleep and Chronobiology at the Toronto Western Hospital, University Health Network.



## Jacques Montplaisir, MD, PhD, CRCPc

Jacques Montplaisir a obtenu un doctorat en médecine de l'Université de Montréal en 1967 et un PhD en sciences neurologiques de cette même université sous la direction du professeur Herbert Jasper en 1972. Par la suite, il a poursuivi pendant trois ans un programme d'études postdoctorales dans le laboratoire du professeur James Olds au California Institute of Technology à Pasadena puis au département de Psychiatry and Behavioral Sciences de l'Université Stanford, Palo Alto. À son retour à Montréal en 1975, il a complété une formation de spécialiste en psychiatrie à l'Université McGill.

En 1977, le docteur Montplaisir a mis sur pied un Centre d'étude du sommeil à l'Hôpital du Sacré-Coeur de Montréal. Il a été subventionné depuis ce temps par le CRMC (IRSC). Depuis 1995, il dirige le Groupe IRSC de recherche sur les troubles du sommeil dont les recherches portent sur le sommeil et les systèmes biologiques et sur les désordres de ces fonctions. Ce Centre comprend 4 axes thématiques, à savoir les troubles du sommeil (Jacques Montplaisir et Anne Décary), la chronobiologie (Marie Dumont et Julie Carrier), l'étude de la fonction onirique (Tore Nielsen et Antonio Zadra) et la psychophysiologie du sommeil et de la douleur (Gilles Lavigne).

Le docteur Montplaisir est professeur titulaire de psychiatrie et des sciences neurologiques à l'Université de Montréal, directeur d'une Chaire de psychopharmacologie et directeur du Réseau québécois de santé mentale. Il a reçu en avril 2001 une Chaire sénior du gouvernement fédéral sur "Les troubles du sommeil".

Dr. Jacques Montplaisir completed Medical school at the Université de Montréal in 1967, where he also obtained a PhD in Neuroscience in 1972 under the supervision of Dr. Herbert Jasper. He then undertook a 3-year postdoctoral training in California, with professor James Olds at the California Institute of Technology, in Pasadena, and with Dr. William Dement at the Stanford University School of Medicine, in Palo Alto, from 1972 to 1975. He returned to Canada in 1975 where he graduated in Psychiatry from McGill University, Montreal, in 1976.

In 1977, Dr. Montplaisir established a Sleep Disorders Center at the Hôpital du Sacré-Coeur de Montréal. He is the director of a CIHR group at the Hôpital du Sacré-Coeur de Montréal; this group is comprised of 7 full-time researchers working in various aspects of sleep and biological rhythms. A new Sleep Disorders Center was built in 1999 and includes 4 different components: a laboratory specifically devoted to the study of sleep disorders directed by Jacques Montplaisir and Anne Décary; a laboratory for the study of normal and pathological dreaming directed by Tore Nielsen and Antonio Zadra; a laboratory for the study of biological rhythms and the effect of bright light directed by Marie Dumont and Julie Carrier; and a laboratory for the psychophysiological study of sleep and pain directed by Gilles Lavigne.

Dr. Montplaisir is currently professor in the departments of Psychiatry and Neurosciences at the Université de Montréal where he also holds a chair in psychopharmacology. He is director of the Quebec Mental Health Research Network. Since April 2001, he holds a Federal Government Senior Chair on Sleep Disorders.



## **PROGRAM AT A GLANCE / SURVOL DU PROGRAMME**

**Friday May 11th / Vendredi 11 mai**

**8:00-16:30 Continuing Medical Education /  
Cours d'enseignement médical continu**  
Congress Hall D and H / Salle de congrès D et H

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*(Offert en anglais seulement.)*

This event is an accredited group learning activity as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada. This program meets the accreditation criteria of the College of Family Physicians of Canada and has been accredited for 6 MAINPRO-MI credits, and 6 credit hours in Category 1 of the Physicians' Recognition Award of the American Medical Association.

At the conclusion of the conference, participants will be able to:

- a) Describe the principle symptoms associated with primary sleep disorders.
- b) List the indications for ordering a sleep study.
- c) Discuss the principles of obtaining a sleep history.
- d) Explain the relationship between circadian rhythm, sleep architecture, and daytime performance.

**8:45-17:00 Technologists' presentations / Présentations pour technologues**  
Capital Hall 5B / Salle de la capitale 5B

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*(Offert en anglais seulement.)*

An informative day for all technologists with varying presentations. Please refer to the Technologist Program for a detailed description.

**12:00-20:00 Exhibitors and poster viewing /  
Exposants et présentations par affiches**  
Congress Hall A and B / Salle de congrès A et B

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**14:00-16:00 Students' activity / Activité étudiante**  
Capital Hall 4B / Salle de la capitale 4B

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Organizational meeting of the CSS student section. All students should attend this session. Please bring your ideas, questions, concerns, and comments. Get to meet students from other labs. This is great opportunity to help shape the student section of the CSS.

Rencontre organisationnelle des étudiants de la SCS. Tous les étudiants devraient participer à cette rencontre. Venez partager vos idées, questions, préoccupations et commentaires. Venez rencontrer les étudiants des autres labos. Il s'agit d'une excellente occasion de contribuer à la section étudiante de la SCS.

**18:30-20:00 Welcome reception / Réception de bienvenue**  
Congress Hall A and B / Salle de congrès A et B

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## **Saturday May 12th / Samedi 12 mai**

### **8:45-10:30 Keynote presentations / Conférences principales**

Congress Hall D and H / Salle de congrès D et H

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This part of the conference is in conjunction with CSS and SWDC. Open to all participants.

Cette composante de la conférence est une activité conjointe de la SCS et de la ASEC. Les sessions sont ouvertes à tous les participants.

### **8:00-16:30 Exhibitors and poster viewing / Exposants et affiches**

Congress Hall A and B / Salle de congrès A et B

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### **10:30-17:00 Canadian Sleep Society Scientific Program / Programme scientifique de la Société Canadienne du Sommeil**

Congress Hall D and H / Salle de congrès D et H

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This portion of the conference is for all CSS participants. It includes oral presentations and poster presentations.

Cette composante de la conférence est destinée aux participants de la SCS. Elle comprend des présentations orales et par affiches.

### **11:30-16:00 Workshops / Ateliers**

Capital Halls 3B, 4B, 5B / Salles de la capitale 3B, 4B, 5B

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This part of the conference is for participants from Sleep/Wake Disorders Canada (SWDC) and Fondation Sommeil. It consists of nine workshops on sleep disorders. For persons interested in this portion of the conference, please contact SWDC for their program.

Cette composante de la conférence est destinée aux participants de Affections du sommeil/éveil Canada (ASEC) et de Fondation Sommeil. Elle comprend neuf ateliers sur les troubles du sommeil. Les personnes intéressées devraient contacter ASEC pour les détails du programme.

### **19:30 Closing banquet / Banquet de clôture**

Congress Hall D and H / Salle de congrès D et H

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Closing banquet for all participants registered to the banquet.

Banquet de clôture pour les participants inscrits.



## SCIENTIFIC PROGRAM / PROGRAMME SCIENTIFIQUE

*Saturday May 12th / Samedi 12 mai*

**8:00-8:45 Registration / Inscrition**  
Congress Hall A and B / Salle de congrès A et B

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Coffee and posters set-up / Café et installation des affiches

**8:45-9:30 Opening ceremony / Session d'ouverture**  
Congress Hall D and H / Salle de congrès D et H

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Joseph De Koninck, President / Président CSS/SCS  
Ed Gibson, President / Président, SWDC/ASEC  
Welcome remarks / Mots de bienvenue

Dr. Roger Broughton, University of Ottawa and Ottawa Hospital  
Honorary President Address / Présentation du Président honoraire  
"Canadian Sleep Research and Sleep Medicine: Some Reflections"

**9:30-10:30 Keynote presentations / Présentations majeures**  
Congress Hall D and H / Salle de congrès D et H

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9:30 Dr. Harvey Moldofsky, University of Toronto and Toronto Hospital Western Division  
"Sleep in Space: the Canadian Odyssey"

10:00 Dr. Jacques Montplaisir, Université de Montréal et Hôpital du Sacré-Coeur  
"The Emergence of Sleep Medicine: the Case of Periodic Leg Movements in Sleep" /  
L'émergence de la médecine du sommeil: le cas des mouvements périodiques des jambes  
au cours du sommeil"

**10:30-11:30 Poster viewing and coffee break /  
Présentations par affiches et pause-café**  
Congress Hall A and B / Salle de congrès A et B

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Exhibitors and poster viewing / Exposants et présentations par affiches

**11:30-12:15 Oral presentations: session # 1 / Présentations orales: session #1**  
Congress Hall D and H / Salle de congrès D et H

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**Animal research / Recherche animale** Chair/Président: Carlyle Smith

11:30 Discharge properties of juxtacellularly labelled and immunohistochemically identified cholinergic  
and GABAergic basal forebrain neurons in relation to cortical EEG activity  
Ian D. Manns, Angel Alonso and Barbara E. Jones (page 15)

11:45 Spectral analysis of REM sleep in an animal model of Alzheimer's disease  
Oscar Díaz-Ruiz, Isabelle Beaulieu and Roger Godbout (page 16)

12:00 Preoptic/anterior hypothalamic (POAH) warming suppresses laryngeal muscle activity during  
sleep  
A. Metes, N. Alam, Rand Szymusiak and D. McGinty (page 17)

**12:15-13:15 Lunch break / Pause déjeuner**

Congress Hall A and B / Salle de congrès A et B

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Exhibitors and poster viewing / Exposants et présentations par affiches

**13:15-14:30 Oral presentations: session #2 / Présentations orales: session #2**

Congress Hall D and H / Salle de congrès D et H

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**Sleep disorders and habits: Surveys and treatment /**

**Troubles du sommeil et habitudes de sommeil: sondages et traitements**

Chair/Président: Rachel Morehouse

- 13:15 Canadian Sleep Centers: A Survey  
Peggy S. Ruyak, Malgorzata Rajda, Christopher Bilsbury (page 18)
- 13:30 The Impact of "Sleepiness" on Adolescent Students  
Gibson E., Powles P., Carll D., Chilcott L., Trajanovic N., O'Brien S., Shapiro C. (page 19)
- 13:45 Imagery Rehearsal for Nightmares in Children: A Nine Month Follow-up Pilot Study  
M. St-Onge & J. De Koninck (page 20)
- 14:00 Will Late Life Insomnia Improve With the Passage of Time or Does Cognitive Behavioural Treatment Help?  
Eva Libman, Laura Creti, Sally Bailes and Catherine S. Fichten (page 21)
- 14:15 Relations Between Objective and Subjective Measures: Cognitive Performance and Quality of Sleep in Elderly Suffering from Chronic Insomnia  
Célyne Bastien, Émilie Fortier-Brochu, Isabelle Rioux, Mélanie LeBlanc & Charles Morin (page 22)

**14:30-14:45 Break / Pause**

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**14:45-15:30 Oral presentations: session #3 / Présentations orales: session #3**

Congress Hall D and H / Salle de congrès D and H

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**Biological rhythms / Rythmes biologiques**

Chair/Président: Marie Dumont

- 14:45 Sleep Disturbances In Patients Affected With Retinitis Pigmentosa  
Doina Ionescu, Helen Driver, Elise Heon, John Flanagan, & Colin Shapiro (page 23)
- 15:00 Do middle-aged subjects have an earlier circadian phase than young subjects?  
Evelyne Touchette, Jean Paquet, Jocelyn Morettini, Julie Carrier (page 24)
- 15:15 Judicious Control of the Pattern of Light Exposure in Circadian Readaptation to Night Shift Work  
Francine O. James, & Diane B. Boivin (page 25)

**15:30-16:00 Coffee break / Pause-café**

Congress Hall A and B / Salle de congrès A et B

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Exhibitors and poster viewing / Exposants et présentations par affiches

**16:00-17:00 Symposium**

Congress Hall D and H / Salle de congrès D and H

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**Sleep onset / L'endormissement**

Chair/Président: Roger Godbout

- 16:00 Shutting Down the Activating System and Closing the Afferent Gateway to the Cerebral Cortex  
Barbara E. Jones (page 26)
- 16:20 Different EEG topographies for kinesthetic and visual images reported at sleep onset  
Tore A. Nielsen (page 27)
- 16:40 Behavioural and EEG evidence for a Sleep Onset Period and Process  
Robert D. Ogilvie (page 28)

**17:15-18:30 CSS annual general meeting /**

**Réunion générale annuelle de la SCS**

Capital Hall 3B / Salle de la capitale 3B

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**19:30**

**Closing banquet / Banquet de clôture**

Congress Hall D and H / Salle de congrès D et H

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# **TECHNOLOGISTS' PROGRAM / PROGRAMME DES TECHNOLOGUES**

*Friday May 11th / Vendredi 11 mai*

## **8:45-9:00 General welcome to participants** Capital Hall 5B

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Kathy Lutley-Borland, BSc, RET, RPSGT  
Chairperson of session, Iain Boyle, RPSGT

9:00 TITRATIONS

Monday Morning Quarter Backing OH THE PRESSURE!  
Terrie Walker, RPSGT (St. John, N.B.)

9:45 UARS: Thermistors, nasal cannula/pressure transducer system and esophageal pressure  
Helen Driver, PhD, RPSGT (Kingston, Ont)

## **10:30-10:45 Coffee break** Congress Hall A and B

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## **10:45-12:15 Session 1** Capital Hall 5B

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10:45 Daytime sleepiness: Narcolepsy and apnea  
Lisa Danahy, RRCP, RPSGT (Kingston, Ont)

11:30 Narcolepsy and HLA  
Carmen Deschenes, RPSGT (Ottawa, Ont)

## **12:15-13:15 Lunch break** Congress Hall A and B

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## **13:15-15:30 Session 2** Capital Hall 5B

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13:15 Tc CO2 monitoring in the sleep lab  
Gail Dicks, RRCP, RPSGT (Ottawa, Ont)

14:00 Nocturnal Non-invasive ventilation: a case presentation  
Lori Davis, RPSGT (Toronto, Ont)

14:45 Life in the Twilight Zone: Coping with night shifts  
Michele Castonguay, BA, RPSGT (Ottawa, Ont)

## **15:30-15:45 Coffee break** Congress Hall A and B

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## **15:45-17:15 Session 3** Capital Hall 5B

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15:45 Artifacts and other things that make "bumps" in the night  
Joe Mink, RPSGT (Saskatoon, Sask)

16:30 Policies and Procedures: how to write them  
Iain Boyle, RPSGT (Markham, Ont)