

Canadian Sleep  
Society



Société Canadienne  
du Sommeil

# Canadian Sleep Society Conference

Toronto Marriott Downtown ♦ September 25-27, 2015

Theme: *Sleep, Health and Disease*



## GENERAL PROGRAM




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## Welcome from the CSS President



Dear colleagues in the sleep community,

On behalf of the Canadian Sleep Society (CSS) and the Executive board of the society, I am delighted to welcome you to the 7<sup>th</sup> Congress of the CSS in Toronto, Ontario. Our biennial scientific conference is an opportunity to share scientific discoveries, network with colleagues, and learn about the latest innovations and technologies in the sleep field.

We have a diverse program designed for our multidisciplinary group of clinicians, scientists, dentists, technologists, and trainees. Highlights for the 3-day meeting include 6 keynote speakers, 12 scientific symposia, oral and poster presentations, and various workshops for technologist, student, and dental groups. The meeting also provides an opportunity for knowledge mobilization which has included media outreach, a CME for physicians on the important topic of insomnia, a public lecture in collaboration with the Toronto Public Library by Dr. Richard Horner on “Why We and Other Living Things Sleep”, and an inaugural Patient Engagement workshop that aims to build a partnership between researchers/clinicians and patients/families to facilitate a better link between health research outcomes and patients’ needs.

I would like to acknowledge and thank the numerous dedicated and talented people that have worked to bring this conference to fruition. First, the professional conference organizers from Plan Ahead Events, Roberta Dexter, Nicole Pelletier, and Beth Wohlfahrt have been working non-stop on all of the details. As well, Stuart Fogel has gone above-and-beyond to implement a new website for the conference. There is a small army of volunteers on the various working committees who are listed on the following pages; these individuals have contributed significantly to the success of this conference. The Chairs of these committees deserve a special recognition for their leadership and work. John Peever has worked tirelessly to bring us a quality scientific program and to organize reviews for abstracts and awards. Jamie MacFarlane organized the physician CME and accreditation. Shelly Weiss led the fund raising efforts to ensure we were able to meet our goals. Brain Murray took on the important role of media liaison. Our Technologist (Michael Eden, Natalie Morin), Student (Samuel Laventure, Kevin Grace), and Dental (Luc Gauthier) representatives on the board spearheaded excellent programs designed for their specific interests. Lastly, I want to sincerely thank industry exhibitors and sponsors that enable this conference to take place and add significantly to the spirit of discovery and innovation that marks the Canadian sleep meeting.

Kimberly Cote, PhD  
Professor, Brock University  
President, CSS  
Co-chair, 7<sup>th</sup> Conference of the CSS

## **Mot de bienvenue de la présidente de la SCS**

Chers collègues de la communauté du sommeil,

Au nom de la Société canadienne du sommeil (SCS) et du conseil d'administration de la société, je suis ravie de vous accueillir au 7<sup>e</sup> Congrès de la SCS à Toronto, Ontario. Notre conférence scientifique biennale est une occasion de partager les découvertes scientifiques, réseauter avec des collègues et vous renseigner sur les dernières innovations et technologies dans le domaine du sommeil.

Nous proposons un programme varié conçu pour notre groupe multidisciplinaire de cliniciens, scientifiques, dentistes, technologues et stagiaires. Les grands moments de la rencontre de trois jours comprennent notamment six conférenciers, douze colloques scientifiques, des exposés et des présentations par affiches ainsi que divers ateliers pour les groupes de technologues, étudiants et dentistes. La rencontre est aussi une occasion pour la mobilisation du savoir, ce qui inclut la sensibilisation des médias, une activité de formation médicale continue (FMC) à l'intention des médecins sur le sujet important de l'insomnie, une conférence publique en collaboration avec la Bibliothèque publique de Toronto donnée par le Dr Richard Horner sur « Pourquoi nous et d'autres êtres vivants dormons », et un atelier inaugural de participation des patients qui vise à établir un partenariat entre les chercheurs/cliniciens et les patients/familles afin de faciliter un meilleur lien entre les résultats de la recherche en santé et les besoins des patients.

Je tiens à exprimer ma reconnaissance à l'endroit des nombreuses personnes dévouées et talentueuses qui ont travaillé pour mener à terme ce congrès. Tout d'abord, les organisateurs professionnels de conférences de Gestion d'événements PAE, Roberta Dexter, Nicole Pelletier, et Beth Wohlfahrt ont travaillé sans relâche sur tous les détails. En outre, Stuart Fogel a surpassé les attentes pour mettre en place un nouveau site web pour la conférence. Une petite armée de bénévoles sur les différents comités de travail figurent aux pages suivantes. Ces personnes ont largement contribué à la réussite de cette conférence. Les présidents de ces comités méritent une mention spéciale pour leur travail et leur leadership. John Peever a travaillé inlassablement pour nous offrir un programme scientifique de qualité et organiser un processus d'évaluation pour les résumés et les prix. Jamie MacFarlane a organisé la FMC pour les médecins et l'accréditation. Shelly Weiss a dirigé les activités de collecte de fonds pour nous assurer d'être en mesure d'atteindre nos objectifs. Brian Murray a assumé le rôle important de liaison avec les médias. Nos représentants des technologues (Michael Eden, Natalie Morin), des étudiants (Samuel Laventure, Kevin Grace) et des dentistes (Luc Gauthier) sur le conseil ont dirigé d'excellents programmes conçus pour leurs domaines respectifs. Enfin, je tiens à remercier sincèrement les exposants de l'industrie et les commanditaires qui permettent la tenue de cette conférence et enrichissent l'esprit de découverte et d'innovation qui marque la conférence canadienne sur le sommeil.

Kimberly Cote, PhD  
Professeur, Brock University  
Présidente de la SCS  
Coprésidente du 7<sup>e</sup> Congrès de la SCS

## Welcome from the CSS Vice-President



Welcome to the 2015 meeting of the Canadian Sleep Society (CSS). This year's Scientific Committee has developed a program that reflects the dynamic range of research in sleep medicine and biology.

Looking at the scientific program you'll see that we have 6 exceptional keynote speakers - Drs. Dean Beebe, David Gozal, Eliot Phillipson, Ron Postuma, Jerry Siegel and Eve van Cauter. You'll also notice that we have 12 symposia that address a range of topics in sleep medicine and biology as well as circadian rhythms in health and disease. And you'll see that we have 3 excellent oral presentation sessions, the majority of which highlight the latest research from outstanding students and trainees.

This year's meeting also includes a broad range of lectures and focused discussions specifically targeted to sleep technologists, dentists and healthcare workers. These events are largely held on Friday September 25th, and are open to all registered conference attendees. Another pre-conference meeting is Student Day -- a trainee-run event that is intended to foster the academic growth and development of CSS trainees.

This year the Scientific Program Committee received over 110 abstracts (a record number!) that will be presented as posters or oral talks. Posters will be highlighted during a wine and cheese on Saturday 26th from 4:30-6pm, and oral presentations will be on Sunday 27th from 10:30-12:00. Please come out to support our trainees - they are the future of the field!

The CSS recognizes outstanding scientific contributions to the field of sleep medicine and biology. The 2015 Distinguished Scientist Award is given to Dr. Eliot Phillipson for his seminal contributions to the field of sleep and breathing in both health and disease. There was a tie for the 2015 Roger Broughton Young Investigator Award, which is given to both Drs. Jean-Philippe Chaput and Thanh Dang-Vu for significant early career contributions to sleep research in Canada. The Outstanding Student Award was awarded to Kevin Grace for the top paper published by a trainee.

On behalf of the Scientific Program Committee (C. Bastien, K. Cote, M. Eden, J. Fleetham, L. Gauthier, K. Grace, R. Horner, V. Mongrain, B. Rusak, S. Weiss) I hope you enjoy the scientific and social content that the 2015 CSS meeting has to offer!

Sincerely,

John Peever, PhD  
Professor, University of Toronto  
Vice-President, CSS  
Co-chair, 7th Conference of the CSS  
Chair, Scientific Program Committee

## Mot de bienvenue du président du Comité du programme scientifique

Bienvenue au congrès 2015 de la Société canadienne du sommeil (SCS). Le Comité du programme scientifique de cette année a mis au point un programme qui reflète la gamme dynamique de recherche en médecine du sommeil et en biologie.

En jetant un coup d'œil au programme scientifique, vous constaterez que nous avons six conférenciers exceptionnels – Dr Dean Beebe, Dr David Gozal, Dr Eliot Phillipson, Dr Ron Postuma, Dr Jerry Siegel et Dr Eve Van Cauter. Vous remarquerez également que nous avons douze colloques qui traitent d'un éventail de sujets portant sur la médecine du sommeil et la biologie ainsi que sur les rythmes circadiens en santé et maladie. Et vous verrez que nous avons trois excellentes séances de présentations orales, dont la plupart met en valeur les récents travaux de recherche menés par de brillants étudiants et stagiaires.

La rencontre de cette année comprend également un large éventail de conférences et de discussions ciblées s'adressant spécifiquement aux technologues du sommeil, aux dentistes et aux travailleurs de la santé. Ces événements auront lieu en grande partie le vendredi 25 septembre et sont accessibles à tous les participants inscrits au congrès. Une autre rencontre ayant lieu avant le congrès est la Journée des étudiants – un événement réalisé par les stagiaires dont le but est de favoriser la croissance et le développement académique des stagiaires de la SCS.

Cette année, le Comité du programme scientifique a reçu plus de 110 résumés (un nombre record!) qui seront présentés sous forme d'affiches ou de communications orales. Les affiches seront exposées lors d'un vin et fromage le samedi 26 septembre de 16 h 30 à 18 h et les présentations orales auront lieu le dimanche 27 septembre de 9 h à 10 h 30. Venez donner votre appui à nos stagiaires – ils représentent l'avenir dans ce domaine!

Le CSS reconnaît les contributions scientifiques exceptionnelles dans le domaine de la médecine du sommeil et de la biologie. Le *Prix du scientifique émérite 2015* est remis au Dr Eliot Phillipson pour ses contributions majeures au domaine du sommeil et de la respiration en matière de santé et maladie. Il y a une égalité pour le *Prix Roger Broughton pour jeune chercheur 2015*, qui est remis au Dr Jean-Philippe Chaput et au Dr Thanh Dang-Vu pour leurs contributions importantes en début de carrière à la recherche sur le sommeil au Canada. Le *Prix d'excellence pour étudiant* est décerné à Kevin Grace pour le meilleur article publié par un stagiaire.

Au nom du Comité du programme scientifique (C. Bastien, K. Cote, M. Eden, J. Fleetham, L. Gauthier, K. Grace, R. Horner, V. Mongrain, B. Rusak, S. Weiss), j'espère que vous profiterez du contenu scientifique et social proposé par le congrès de la SCS 2015!

John Peever, PhD  
Professeur, University of Toronto  
Vice-président de la SCS  
Coprésident du 7<sup>e</sup> Congrès de la SCS  
Président du Comité du programme scientifique

## Committees

### Scientific Program Committee

<b>Chair</b>	John Peever, PhD, University of Toronto
<b>Members</b>	Kimberly Cote, PhD, Brock University
	Shelly Weiss, MD, University of Toronto
	Celyne Bastien, PhD, Laval University
	Richard Horner, PhD, University of Toronto
	John Fleetham, MD, University of British Columbia
	Kevin Grace, MSc, University of Toronto
	Valerie Mongrain, PhD, University of Montreal
	Ben Rusak, PhD, Dalhousie University
	Michael Eden, RPSGT, Cobourg Sleep Clinic
	Luc Gauthier, DMD, MSc, Saguenay

### Technologist Committee

<b>Chair</b>	Michael Eden, RPSGT, Cobourg Sleep Clinic
<b>Members</b>	Helen Driver, PhD, Kingston General Hospital
	Natalie Morin, RPSGT, Sleep Strategies
	Lori Davis, RPSGT, Westpark Hospital
	Colin Massicotte RPSGT, Sick Kids Hospital

### Local Organizing Committee

<b>Chair</b>	Jamie MacFarlane, PhD, University of Toronto
<b>Members</b>	John Peever, PhD, University of Toronto
	Kimberly Cote, PhD, Brock University
	Shelly Weiss, MD, University of Toronto
	Margaret Rajda, MD, Dalhousie University
	Marta Novak, MD, University of Toronto
	Clodagh Ryan, MD, University of Toronto
	Christopher Li, MD, University of Toronto
	Samuel Laventure, BSc, Université de Montréal
	Kevin Grace, MSc, University of Toronto

### Fundraising Committee

<b>Chair</b>	Shelly Weiss, MD, University of Toronto
<b>Members</b>	Kimberly Cote, PhD, Brock University
	Jamie MacFarlane, PhD, University of Toronto



#### Dental Committee

**Chair** Luc Gauthier, DMD, MSc, Saguenay

**Members** Gilles Lavigne, PhD, DMD, M.Sc.,  
Université de Montréal

Fernanda Almeida, PhD, University  
of British Columbia

Tina Meisami, BSc, DDS, FRCDC,  
Toronto

#### Student Committee

**Chairs** Samuel Laventure, BSc, Université  
de Montréal

Kevin Grace, MSc, University of  
Toronto

**Members** John Peever, PhD, University of  
Toronto

Zoltan Torontali, BSc, University of  
Toronto

Erin Higgs, BA, Brock University

Kevin MacDonald, MA, Brock  
University

Jimmy Fraigne, PhD, University of  
Toronto

Jonathan Dubé, MSc, Université de  
Montréal

#### Conference Management Team:

Roberta Dexter, Nicole Pelletier, Beth Wohlfahrt

**Plan Ahead**  
**events**  
*It's What We Do*

## About the Canadian Sleep Society

The CSS is a professional association formed in June 1986 to further the advancement and understanding of sleep and its disorders. The vision of CSS is:

***“Healthy sleep for healthy Canadians”***

**MISSION STATEMENT:** The Canadian Sleep Society is a national organization committed to improving sleep for all Canadians through: support for research, promotion of high quality clinical care, education of professionals and the public, and advocacy for sleep and sleep disorders medicine.

### Past-Presidents of the Canadian Sleep Society

Roger Broughton, MD, PhD	1986-1988
Robert D. Ogilvie, PhD	1988-1990
Meir H. Kryger, MD	1990-1993
Alistair MacLean, PhD	1993-1996
Charlie George, MD	1996-1999
Joseph De Koninck, PhD	1999-2002
Charles Morin, PhD	2002-2005
Gilles Lavigne, DMD, PhD	2005-2008
Helen S. Driver, PhD, RPSGT, DABSM	2008-2011
Shelly Weiss, MD	2011-2014

## Distinguished Scientist Award



The Canadian Sleep Society (CSS) is pleased to announce that the recipient of the 2015 Distinguished Scientist Award is Eliot A. Phillipson, OC, MD, FCAHS Sir John and Lady Eaton Professor of Medicine Emeritus University of Toronto. This award is in recognition of a scientist who has made significant contributions to the field of sleep research in Canada.

Eliot Phillipson is the Sir John and Lady Eaton Professor of Medicine Emeritus at the University of Toronto. He received his MD with Distinction from the University of Alberta, and following postgraduate training in Internal Medicine, undertook research training at the University of California, San Francisco.

In 1971, Dr. Phillipson was appointed to the University of Toronto as a clinician-scientist with a research focus on the regulation of respiration. His basic research led to formulation of a model of the regulation of respiration during sleep, and in 1978 he established one of the first human sleep laboratories in North America with a focus on breathing disturbances.

Dr. Phillipson served as Physician-in-Chief at Mount Sinai Hospital, Toronto from 1987-97, and as Sir John and Lady Eaton Professor and Chair of the Department of Medicine, University of Toronto from 1993-2004. From 2004-10 he served as President and CEO of the Canada Foundation for Innovation, and in 2011-12 as Chair the Expert Panel on the State of Science and Technology in Canada for the Council of Canadian Academies.

Dr. Phillipson is an elected member of the prestigious American Society for Clinical Investigation and the Association of American Physicians, and is a Fellow of the Canadian Academy of Health Sciences. He holds an Honorary Doctor of Science from the University of Alberta, and is an Officer of the Order of Canada.

He will receive his award during the opening ceremonies on Saturday morning at 8:00 am. Dr. Phillipson is also one of our keynote speakers during the scientific meeting this year. Come and join us for his address, scheduled on Saturday from 8:45 – 9:30 am titled *“Evolution of Sleep and Breathing in Canada”*.

## AWARD WINNERS

### Roger Broughton Young Investigator Award Winners

The Roger Broughton Young Investigator Award honours the contributions of Dr. Roger Broughton, founding President of the Canadian Sleep Society (1986-88), and one of the founding figures of Canadian sleep research. The award will be made to a young scientist for important early career research contributions, rather than a single submitted abstract or paper.

Please join us in congratulating this year's winners, Thanh Dang-Vu and Jean-Philippe Chaput.

#### JEAN-PHILIPPE CHAPUT, PhD



Dr. Chaput is a researcher at the Children's Hospital of Eastern Ontario Research Institute and an Assistant Professor in the Department of Pediatrics at the University of Ottawa (Canada). He holds a Junior Research Chair in Healthy Active Living and Obesity Research. His research focuses on obesity prevention and the adoption of a healthy lifestyle. He is also interested in new determinants of obesity such as lack of sleep and mental stress. Dr. Chaput has published more than 150 peer-reviewed scientific articles and has contributed to a large number of conferences around the world.

#### THANH DANG-VU, MD PhD



Thanh Dang-Vu earned his M.D. in 2004 at the Université de Liège, in Belgium. He then completed his residency in Neurology and a Ph.D. in Biomedical Science in the same university. He did a post-doctoral fellowship in the department of Neurology at the Massachusetts General Hospital and Harvard Medical School in Boston. He completed a second postdoctoral fellowship at the Center for Advanced Research in Sleep Medicine at the Université de Montréal and Hôpital du Sacré-Coeur de Montréal. He is currently a CIHR New Investigator and a FRQS

Research Scholar. Dr Dang-Vu is also an attending neurologist and a researcher at the Institut Universitaire de Gériatrie de Montréal (IUGM), affiliated with the University of Montreal, and an Adjunct Professor of Neurology and Neurosurgery at McGill University.

They will receive their awards during the opening ceremonies on Saturday morning at 8:00. Dr. Dang-Vu will also present "*Neuroimaging of sleep and sleep disorders*" on Friday, September 25 from 11:15 am – 12:00 pm during the Student Program.

#### Past Winners of the Roger Broughton Young Investigator Award :

- 2004   Kimberly Cote
- 2007   John Peever and Penny Corkum
- 2009   Jean-Francois Gagnon
- 2011   Robyn Stremler
- 2013   Antoine Adamantidis



## Student Outstanding Achievement Award

This award is for the scientific merit of a single publication by a student in the field of sleep research. Funding for these awards is made through the CSS student fund – thank you to CSS members who made contributions to the student fund with their CSS registration.

The CSS is pleased to present this year's award to **Kevin P. Grace** for his innovative publication: *Endogenous Cholinergic Input to the Pontine REM Sleep Generator Is Not Required for REM Sleep to Occur*. [The Journal of Neuroscience, 22 October 2014, 34(43): 14198-14209; doi: 10.1523/JNEUROSCI.0274-14.2014]. Kevin will present his work during the Student Day on Friday, September 25 at 1:45 pm. He will receive his award during the opening ceremonies on Saturday morning at 8:00.

## Student and Technologist Abstract Prize Winners

This year we have one student abstract prize winner and one technologist abstract prize winner. Both of them will receive their award during the opening ceremonies on Saturday morning at 8:00am and will also present the results of their studies.

### STUDENT ABSTRACT PRIZE WINNER – Zoltan Torontali, University of Toronto

Abstract Title: *Activation of the REM sleep circuit induces cataplexy in wild-type mice*

#### Presentation times:

Student Day Program on Friday, September 25 at 10:45

Oral Session 2 on Sunday, September 27 beginning at 10:30 am

### TECHNOLOGIST ABSTRACT PRIZE WINNER : Debra Medin, RPSGT

Abstract Title: *Impact of Standardized Phone Follow-up on PAP Adherence in Obese Adolescent Patients with Obstructive Sleep Apnea.*

#### Presentation time:

Oral Session 3 on Sunday, September 27 beginning at 10:30 am

## **Canadian Sleep Society (CSS) / Institute for Circulatory and Respiratory Health (ICRH) Student Travel Awards**

Each year the CSS and the Institute of Circulatory and Respiratory Health (ICRH) jointly sponsor TRAVEL AWARDS in order to recognize outstanding Canadian research contributions made by students and postdoctoral fellows in the field of sleep research.

These awards are only open to trainees, and are worth a maximum of \$1,000, including international travel.

CSS and CIHR-ICRH will jointly provide funding to students and postdoctoral fellows working in sleep research in Canada to travel to a major scientific sleep meeting (e.g., CSS, APSS, ERS, WSF, WASM, SfN , ATS) to present their research.

Congratulations to the recipients of the 2015 CSS/ICRH Student Travel Awards (\$1000 each):

- Soufiane Boucetta, Concordia University
- Jimmy Fraigne, University of Toronto
- Benjamin Gaudet-Fex, Université de Montréal
- Tetyana Kendzerska, University of Toronto
- Dillon McKenna, University of Toronto
- Melodee Mograss, Concordia University
- Thaïna Rosinvil, Hôpital du Sacré-Coeur de Montréal; Université de Montréal
- Matthew Snow, University of Toronto
- Zoltan Torontali, University of Toronto

## **KEYNOTE ADDRESSES: SUMMARY**

### **Keynote 1 - From a Sleeping Dog to National Programs: Evolution of Sleep and Breathing in Canada**

Eliot A. Phillipson, OC, MD, FCAHS; Sir John and Lady Eaton Professor of Medicine Emeritus, University of Toronto

#### **2015 Distinguished Scientist Award Winner**

Saturday, September 26, 2015 8:45 – 9:30 am Grand Ballroom

### **Keynote 2 - Consequences of Sleep Apnea: The More We Dig, the More We Find**

Dr. David Gozal, M.D., Herbert T. Abelson Professor, University of Chicago

Saturday, September 26, 2015 9:30 – 10:30 am Grand Ballroom

### **Keynote 3 - Sleep Disturbances, Obesity and Diabetes: Interacting Epidemics**

Dr. Eve Van Cauter, PhD; Frederick H. Rawson Professor, Sleep, Metabolism and Health Center (SMAHC), Department of Medicine, The University of Chicago

Saturday, September 26, 2015 1:30 – 2:30 pm Grand Ballroom

### **Keynote 4 - Too Many Teens get too Little Sleep: Impact on Adolescent Mental and Physical Health**

Dr. Dean W. Beebe, PhD, ABPP; Cincinnati Children's Hospital Medical Center

Sunday, September 27, 2015 8:00 – 9:00 am Grand Ballroom

### **Keynote 5 - Role of Hypocretin (Orexin) in Narcolepsy, Parkinson's and Normal Behavior**

Dr. Jerome Siegel; UCLA, VAGLAHS

Sunday, September 27, 2015 9:00 am – 10:00 am Grand Ballroom

### **Keynote 6 - REM Sleep Behaviour Disorder: The Royal Path to Neuroprotective Treatment**

Dr. Ron Postuma, MD, MSc, Associate Professor, Department of Neurology, Montreal General Hospital

Sunday, September 27, 2015 4:30 – 5:30 pm Grand Ballroom

## **Keynote 1 - From a Sleeping Dog to National Programs: Evolution of Sleep and Breathing in Canada**

**Eliot A. Phillipson, OC, MD, FCAHS**

**Sir John and Lady Eaton Professor of Medicine Emeritus, University of Toronto**

**2015 Canadian Sleep Society Distinguished Scientist Award Winner**

**Saturday, September 26, 2015 8:45 – 9:30 am Grand Ballroom**

During the past 40 years, research in sleep and breathing in Canada has evolved from single-investigator operations to large national initiatives involving multidisciplinary teams. How did this transition come about? How much of it was by chance and how much by design? What lessons can be learned from this evolution? Will it be of value in anticipating future directions? This presentation will provide some insight into these and related questions, from the perspective on one individual who was witness to the entire process – from a sleepy dog to programs of national scope.



Eliot Phillipson is the Sir John and Lady Eaton Professor of Medicine Emeritus at the University of Toronto. He received his MD with Distinction from the University of Alberta, and following postgraduate training in Internal Medicine, undertook research training at the University of California, San Francisco. In 1971 Dr. Phillipson was appointed to the University of Toronto as a clinician-scientist with a research focus on the regulation of respiration. His basic research led to formulation of a model of the regulation of

respiration during sleep, and in 1978 he established one of the first human sleep laboratories in North America with a focus on breathing disturbances.

Dr. Phillipson served as Physician-in-Chief at Mount Sinai Hospital, Toronto from 1987-97, and as Sir John and Lady Eaton Professor and Chair of the Department of Medicine, University of Toronto from 1993-2004. From 2004-10 he served as President and CEO of the Canada Foundation for Innovation, and in 2011-12 as Chair the Expert Panel on the State of Science and Technology in Canada for the Council of Canadian Academies. Dr. Phillipson is an elected member of the prestigious American Society for Clinical Investigation and the Association of American Physicians, and is a Fellow of the Canadian Academy of Health Sciences. He holds an Honorary Doctor of Science from the University of Alberta, and is an Officer of the Order of Canada.



## Keynote 2 - Consequences of Sleep Apnea: The More We Dig, the More We Find

**Dr. David Gozal, M.D.**

**Herbert T. Abelson Professor, University of Chicago**

**Saturday, September 26, 2015 9:30 – 10:30 am Grand Ballroom**

This presentation will review the scope of end-organ dysfunction elicited by sleep apnea and potential mechanisms involved in such morbidities.

Learning Objectives:

1. To briefly review the pathophysiology of sleep apnea in children
2. To illustrate the phenotypic variance of neurocognitive, vascular and metabolic consequences of sleep apnea
3. To present genomic and epigenetic alteration in pediatric sleep apnea



Dr. Gozal is currently the Herbert T. Abelson Professor at the University of Chicago, where he also holds the title of Pritzker Scholar. He received his M.D. from the Hebrew University of Jerusalem, completed his pediatric residency at the Haifa Medical Center in Israel, and then spent 2 years in Cameroon, West Africa, developing rural healthcare networks, for which he received the title of “Knight of the Order of Merit”. He then completed his pediatric pulmonology and sleep medicine training at Children’s Hospital Los Angeles in 1993, and joined the faculty at the University of Southern California and UCLA. In 1994, he moved to Tulane University, where he rose through the ranks and was appointed tenured Professor and Constance Kaufman Endowed Chair in Pediatric Pulmonology Research.

From 1999 till 2009, Dr. Gozal was at the University of Louisville as the Children’s Hospital Foundation Chair for Pediatric Research, Distinguished University Scholar, Vice-Chair for Research, Director of the Kosair Children’s Research Institute, and Chief of the Division of Pediatric Sleep Medicine and the Sleep Medicine Fellowship Program, both of which were recognized as programs of distinction by the American Academy of Sleep Medicine.

In 2009, Dr. Gozal joined the University of Chicago as Chairman of the Department of Pediatrics and Physician-in-Chief of Comer Children’s Hospital, a position he has held till June 2014. Dr. Gozal’s research interests emphasize bench to bedside approaches to pediatric sleep disorders, with projects encompassing a wide range of interests, such as gene and cellular regulation in hypoxia and sleep disruption, murine models of sleep disorders, and genomic and proteomic approaches to clinical and epidemiological aspects of sleep in children, including collaborative work in several countries around the world.

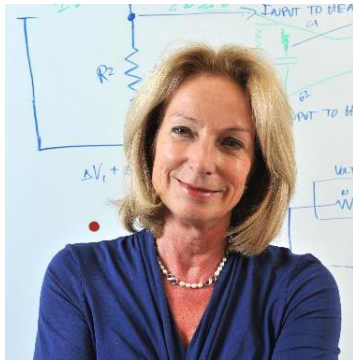
### Keynote 3 - Sleep Disturbances, Obesity and Diabetes: Interacting Epidemics

**Dr. Eve Van Cauter, PhD**

**Frederick H. Rawson Professor, Sleep, Metabolism and Health Center (SMAHC), Department of Medicine, The University of Chicago**

**Saturday, September 26, 2015 1:30 – 2:30 pm Grand Ballroom**

This presentation will discuss the roles of insufficient sleep, poor sleep quality, insomnia, obstructive sleep apnea and misaligned sleep in the risk and severity of insulin resistance, obesity and type 2 diabetes. Evidence from laboratory and epidemiology studies will be reviewed.



Eve Van Cauter, PhD is the Frederick H. Rawson Professor of Medicine at the University of Chicago, where she directs the Sleep, Metabolism and Health Center (SMAHC). During the past decade, research in her laboratory focused on the impact of decreases in sleep duration and quality on markers of health and the interaction of sleep loss with the aging process. Her group identified sleep loss and poor sleep quality as novel risk factors for obesity and diabetes. In recent years, her efforts have focused on the impact of obstructive sleep apnea on the risk and severity of type 2 diabetes and the metabolic implications of circadian misalignment.

Eve Van Cauter has received the Pharmacia & Upjohn International Award for Excellence in Published Clinical Research in the Journal of Clinical Endocrinology and Metabolism (1999), the Pfizer Lectureship in Sleep (2005), the 2007 Gerald D. Aurbach Award of the Endocrine Society, the 2007 Outstanding Research Award of the Sleep Research Society, the 2010 Peter C. Farrell Prize in Sleep Medicine at Harvard Medical School and the 2013 Distinguished Scientist Award of the Sleep Research Society. She has served on the Editorial Board of the Journal of Clinical Endocrinology and Metabolism for 10 years, and is an Associate Editor of the journal Sleep. She is the author of more than 250 publications.

## Keynote 4 - Too Many Teens get too Little Sleep: Impact on Adolescent Mental and Physical Health

**Dr. Dean W. Beebe, PhD, ABPP**

**Cincinnati Children's Hospital Medical Center**

**Sunday, September 27, 2015 8:00 – 9:00 am Grand Ballroom**

Chronically shortened sleep is endemic among adolescents in developed countries. However, some authors have questioned whether short sleep equates to inadequate sleep, expressing concern that the field has relied too heavily on correlational studies. This presentation will address those concerns by highlighting the complementary strengths and weaknesses of different types of studies, and will outline growing experimental evidence that chronically shortened sleep can cause or contribute to real-world deficits in adolescents' thinking, mood regulation, academic performance, health-related behaviors, and driving risk.

### Learning Objectives:

1. Summarize the prevalence rates of short sleep among North American adolescents on school nights.
2. Summarize convergent findings on the associations between, and cause-effect relationships between, short sleep and adolescents' learning, mood, attention, obesity and overeating, and driving behaviors.



Dr. Dean Beebe is Professor of Pediatrics at University of Cincinnati College of Medicine and Director of the Neuropsychology Program in the Division of Behavioral Medicine and Clinical Psychology at Cincinnati Children's Hospital Medical Center. He received his PhD from Loyola University Chicago and completed postdoctoral fellowship in 2000 at Cincinnati Children's.

He is a board-certified clinical neuropsychologist and subspecialist in pediatric neuropsychology. He serves on the Board of Directors for the American Academy of Clinical Neuropsychology, as well as advisory committees for the Sleep Research Society and American Board of Clinical Neuropsychology. He is an Associate Editor of Journal of Pediatric Psychology and is on the editorial boards of the journals SLEEP and Child Neuropsychology. Over the past 15 years, his research has focused primarily on the effects of sleep disorders and short sleep on the cognitive, behavioral, and emotional functioning of children and adolescents. That focus recently has expanded to encompass more traditional physical health outcomes, including dietary intake, physical activity, and accident risk amongst novice drivers.

## Keynote 5 - Role of Hypocretin (Orexin) in Narcolepsy, Parkinson's and Normal Behavior

**Dr. Jerome Siegel**

**UCLA, VAGLAHS**

**Sunday, September 27, 2015 9:00 am – 10:00 am Grand Ballroom**

A loss of hypocretin (also called orexin) has been identified as the cause of human narcolepsy. It has also been implicated in some of the major symptoms of Parkinson's disease. Further investigations in animals and humans reveals a key emotional component controlling the activity of hypocretin cells and the deficits resulting from the loss of these cells. Manipulation of this system may have important implications in the treatment of depression and addiction. Further work in animals showing the behavioral correlates and deficits of hypocretin cells activity and inactivity, will be described as will microdialysis work in humans, showing what makes hypocretin cells and melanin concentrating cells active. The therapeutic effects of administering hypocretin will be described.

Learning Objectives:

1. Understand the anatomical abnormalities causing human narcolepsy
2. Understand the normal role of hypocretin (orexin) in mouse and rat behavior
3. Understand the normal role of hypocretin in human behavior. 4. Understand the implications of hypocretin pathology for "big picture" of how waking systems control arousal.



Jerome Siegel is Professor of Psychiatry and Biobehavioral Sciences and Brain Research at UCLA, a former president of the Sleep Research Society and Chair of the Program committee of the Association of Professional Sleep Societies. He has won awards for his research, including the Special Award for Research Leading to the Discovery of the Cause of Human Narcolepsy from the Sleep Research Society, the Distinguished Scientist Award from the Sleep Research Society, the Dement Award from the American Academy of Sleep Medicine, the MERIT and Javits awards from NIH and the Middleton Award from the Department of Veteran's Affairs. His work is available on his lab website: <http://www.semel.ucla.edu/sleepresearch>.



## Keynote 6 - REM Sleep Behaviour Disorder: The Royal Path to Neuroprotective Treatment

**Dr. Ron Postuma, MD, MSc**

**Associate Professor, Department of Neurology, Montreal General Hospital**

**Sunday, September 27, 2015 4:30 – 5:30 pm Grand Ballroom**



Rapid eye movement (REM) sleep behavior disorder (RBD) is a parasomnia characterized by dream enactment behavior associated with loss of normal atonia during REM sleep. Idiopathic RBD (iRBD) patients have a profoundly elevated risk of developing a neurodegenerative disease. A recent survival curve analysis of our cohort reveals that almost 80% of patients initially diagnosed with iRBD developed such a disease, mainly Dementia with Lewy bodies and Parkinson's disease, after a mean of only 8 years. The extremely high 'conversion' rate to defined clinical neurodegenerative disease, combined with a sufficiently long lead time to meaningfully intervene make

RBD patients the ideal candidates for clinical trials on Dementia with Lewy bodies and Parkinson's disease. In designing a clinical trial, it is critical to select the most appropriate at-risk population.

Dr. Postuma is Associate Professor of Neurology at McGill University. He graduated with his Medical Degree from the University of Manitoba. He then completed a Neurology fellowship at McGill University, a Movement Disorders research fellowship at the University of Toronto, and a Masters in Epidemiology at McGill. He is a clinical movement disorders specialist, and has a research interest mainly centered around non-motor aspects of Parkinson's disease, including diagnosis and treatment of sleep disorders, early detection of PD, recognition and awareness of non-motor problems, and clinical trials to improve non-motor aspects of disease.

## 2015 SPONSORS & EXHIBITORS

The CSS graciously acknowledges the following Sponsors & Exhibitors for their participation and support:

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### Platinum Sponsor:



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### Sponsored Breakfasts and Luncheons

#### Saturday Breakfast Symposium Hosted by Phillips Respironics: Impacting Healthcare by Changing CPAP Adherence

Speaker: Mark Aloia Senior Director of Global Clinical Research for Philips Healthcare, Associate Professor of Medicine at National Jewish Health in Denver

Saturday, September 26, 2015 6:30 – 7:45 am Location: York A/B

ADVANCED RSVP REQUIRED (entry ticket required)

#### Sunday Breakfast Symposium Hosted by Devilbiss Healthcare Canada: Apnea Phenotype Clinical Challenges and Fixes

Speaker: Robert J. Thomas, MD Assistant Professor of Medicine, Harvard Medical School Physician, Associate Professor, Pulmonary, Critical Care & Sleep, Department of Medicine, Beth Israel Deaconess Medical Center Visiting Scientist, Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital

Sunday, September 27, 2015 6:30 – 7:45 am Location: York A/B

ADVANCED RSVP REQUIRED (entry ticket required)

*NOTE: These breakfast sessions are not a part of the CME accredited program*

### Braebon Dentists Luncheon - Saturday, September 26, 2015 from 12:00-1:30 pm; Bay Room





## Conference and Exhibitor Floor Plan



Toronto Marriott Downtown Eaton Centre Hotel 525 Bay Street - Toronto, Ontario M5G 2L2 Canada P - 1 416 597 9200 1 F - 1 416 597 9211

Booth	Exhibitors	Sponsorship level	Links
1	DeVilbiss Healthcare	Platinum Sponsor	<a href="http://www.devilbisshealthcare.com">www.devilbisshealthcare.com</a>
2	ResMed	Silver Sponsor	<a href="http://www.resmed.com/us/en/consumer.html">www.resmed.com/us/en/consumer.html</a>
3 - 4	Philips Respironics	Diamond Sponsor	<a href="http://www.usa.philips.com/healthcare-medical-sleep-and-respiratory-care">www.usa.philips.com/healthcare-medical-sleep-and-respiratory-care</a>
5	Paladin Labs		<a href="http://www.paladin-labs.com">www.paladin-labs.com</a>
6	KEGO Corporation		<a href="http://www.kegocorp.com">www.kegocorp.com</a>
7 - 8	Medigas	Silver Sponsor	<a href="http://www.medigas.com">www.medigas.com</a>
9	VitalAire		<a href="http://www.vitalaire.com">www.vitalaire.com</a>
10	Fisher and Paykel Healthcare		<a href="http://www.fphcare.com/gateway">www.fphcare.com/gateway</a>
11	Natus Neurology Incorporated		<a href="http://www.natus.com">www.natus.com</a>
12	CPAP Direct Ltd.		<a href="http://www.cpapdirect.ca">www.cpapdirect.ca</a>
14	Shoppers Home Health Care		<a href="http://www.shoppersdrugmart.ca">www.shoppersdrugmart.ca</a>
15	Sleep Therapeutics		<a href="http://sleeptherapeutics.ca/">http://sleeptherapeutics.ca/</a>
17	Motion Specialties		<a href="http://www.motionspecialties.com">www.motionspecialties.com</a>
18	Nora, Smart Snoring Solution		<a href="http://www.smartnora.com">www.smartnora.com</a>
19	Panthera Dental		<a href="http://www.pantheradental.com">www.pantheradental.com</a>
20	BRPT - Board of Registered Polysomnographic Technologists		<a href="http://www.brpt.org">www.brpt.org</a>
21	Sunset Healthcare Solutions		<a href="http://www.sunsethcs.com">www.sunsethcs.com</a>
22	BresoTec Inc.		<a href="http://www.bresotec.com">www.bresotec.com</a>
23	Olympus Canada, Medical Systems Group		<a href="http://www.olympuscanada.com">www.olympuscanada.com</a>
24	McArthur Medical Sales Inc.		<a href="http://www.mcarthurmedical.com">www.mcarthurmedical.com</a>
25	Cerebra Health		<a href="http://www.cerebrahealth.com">www.cerebrahealth.com</a>
26	Respiratory HomeCare Solutions Inc		<a href="http://www.rhscanada.com">www.rhscanada.com</a>
27	BRAEBON Medical Corporation		<a href="http://www.braebon.com">www.braebon.com</a>
28	Zephyr Sleep Technologies		<a href="http://www.zephyrsleep.com">www.zephyrsleep.com</a>
29	Choice One Medical		<a href="http://www.choiceonemedical.com">www.choiceonemedical.com</a>
30	Somnoco		<a href="http://www.somnoco.com">www.somnoco.com</a>
31	Provent Sleep Therapy		<a href="http://www.proventtherapy.com">www.proventtherapy.com</a>

## Program Accreditation: CME, CEC and CDE Information

### CME Credit Information for Physicians

This continuing education event is held under the auspices of Continuing Professional Development, Faculty of Medicine, University of Toronto and the Canadian Sleep Society.

#### Accreditation:

Royal College of Physicians and Surgeons of Canada – Section 1:

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, approved by Continuing Professional Development, Faculty of Medicine, University of Toronto up to a maximum of 21.0 hours (7.0 Friday, 14.0 Sat/Sun)

College of Family Physicians of Canada – Mainpro M1:

This program meets the accreditation criteria of The College of Family Physicians of Canada and has been accredited by Continuing Professional Development, Faculty of Medicine, University of Toronto, for up to 21.0 Mainpro-M1 credits (7.0 Friday, 14.0 Sat/Sun).



**UNIVERSITY OF TORONTO**  
**FACULTY OF MEDICINE**  
Continuing Professional Development

### CEC Credit Information for Technologists

Continuing Education Credits (CEC) for Technologists for attendance at CSS conferences are recognized by the Board of Registered Polysomnographic Technologists (BRPT).

Total number of CEC hours for attendance at the three day program in English and French is 19.75. Broken down by day:

Friday - 7.0

Saturday - 6.0

Sunday - 6.75

### CDE Credit Information for Dentists

Total number of CDE hours for attendance at the three day program is 6.5. Broken down by day:

Friday - 3.5

Saturday - 3.0

### CEC Credit Information for Psychologists

Most associations will recognize physician credits required for professional development. Members of various allied health and other professionals are encouraged to add their attendance at various accredited events to their personal CPD portfolios and keep letters of accreditation in case of audit.



## SCHEDULE AT A GLANCE - Friday, September 25, 2015

### CME Day on Insomnia

**NOTE:** This program is **not included** in general conference registration and requires **separate registration** and **an additional fee**.

Time	Session
8:30-8:35	Greetings and Introductions
8:35-9:10	A Review of Basic Sleep Physiology
9:10-9:45	Sleep Requirement Across the Lifespan
9:45-10:20	An Introduction to the Concept of Insomnia
10:20-10:40	Health Break
10:40-11:15	Beyond Sleep Hygiene: Sleep Tracking and CBT
11:15-11:50	Sleep disruption and chronic pain
11:50-12:25	Moody, sleepy or both? An overview of interactions between mood/anxiety disorders and sleep
12:30- 1:30	Lunch
1:30-2:05	Insomnia and shiftwork
2:05-2:40	An update on medications for insomnia
2:45-5:45	OPTION 1: CME Non-Rotating - CBT-I Workshop (Break in room)
2:40-3:00	Health Break
3:00-5:00	OPTION 2: CME and Rotating Afternoon Sessions
	Rotating Afternoon Sessions:
3:00-4:00	A. Introduction to Sleep-specific Cognitive Behavioural Therapy
3:00-4:00	B. Case Studies with Co-morbidities Using a Panel Style from Different Backgrounds
	Full Group:
4:00-5:00	The Alberta Medical Association Toward Optimized Practice (TOP) Insomnia Guideline Project: Updating Clinical Practice Guidelines for Primary Care
6:00-7:30	Welcome Reception

## Dental – Friday Program

Time	Session
1:00-1:50	Sleep apnea: cardiovascular consequences, co morbidity and mortality
1:50-2:40	Differential diagnostic of OSA and oro-facial pain
2:40-3:10	Break
3:10-4:00	Maxillo-mandibular advancement: surgical treatment modality for OSA
4:00-4:50	Efficacy of OA and combination therapy as an option
4:50-5:15	Open questions for speakers and conclusions
6:00-7:30	Welcome Reception
*Saturday programming is listed on the overall conference Schedule at a Glance	

## Student – Friday Program

Time	Session
9:30-9:45	Opening remarks
9:45-10:30	Sleep in Preindustrial Societies Under Evolutionarily Relevant Conditions
10:30-10:45	Abstract Presentation: "Cortical thinning mediates age-related changes in NREM sleep oscillations during adulthood "
10:45-11:00	Abstract Presentation: "Activation of the REM sleep circuit induces cataplexy in wild-type mice"
11:00-11:15	Health break
11:15-12:00	Abstract Presentation: "Neuroimaging of sleep and sleep disorders"
12:00-1:30	Lunch with mentors
1:30-1:45	CSS and Trainee: Future Projects
1:45-2:00	Abstract Presentation: "Endogenous Cholinergic Input to the Pontine REM Sleep Generator Is Not Required for REM Sleep to Occur"
2:00-2:15	Abstract Presentation: "Sleep EEG coherence during middle years of life"
2:15-2:45	Abstract Presentation: "Clinical Cases in Paediatric Sleep Medicine: Adults are not just big children"
2:45-3:00	Health Break
3:00-5:00	Rotating Workshops: 1) Sleep research with rodents
3:00-5:00	Rotating Workshops: 2) EEG/fMRI sleep studies
6:00-7:30	Welcome Reception

## Technologist – Friday Program

Time	Session
8:30-9:15	Movement Disorders and Parasomnias
9:15-10:15	Current Medications and their Effects
10:15-10:30	Health break
10:30-11:00	Credentialing and Exam Prep
11:00-11:45	Paediatric Collection/Analysis
11:45-12:30	Level 3 Testing
12:30-1:30	Lunch
1:30-2:00	RPSGTs – A critical link to PAP therapy success
2:00-3:00	Sleep Apps
3:00-3:15	Health break
3:15-4:00	Narcolepsy
4:00-5:00	Case Reports
6:00-7:30	Welcome Reception
<i>Saturday and Sunday Technologist Sessions are listed on the overall conference Schedule at a Glance</i>	

## SCHEDULE AT A GLANCE -Saturday, September 26, 2015

6:30 AM	6:30 PM	Registration Open			
Start	End	General Sessions		Technologist	Dental
6:30 AM	7:45 AM	<b>Sponsored Breakfast Symposium - Hosted by Philips Respironics: Impacting Healthcare by Changing CPAP Adherence</b> Speaker: Mark Aloia Senior Director of Global Clinical Research for Philips Healthcare, Associate Professor of Medicine at National Jewish Health in Denver Advanced RSVP Required - York A/B			
7:30 AM	8:00 AM	Poster Installation - Exhibit Hall & Foyer (Trinity Ballroom)			
8:00 AM	8:45 AM	<b>Opening Ceremonies and Awards</b> Grand Ballroom			
8:45 AM	9:30 AM	<b>Keynote 1 - From a Sleeping Dog to National Programs: Evolution of Sleep and Breathing in Canada</b> Eliot A. Phillipson, OC, MD, FCAHS; Sir John and Lady Eaton Professor of Medicine Emeritus, University of Toronto <i>2015 Distinguished Scientist Award Winner</i> Grand Ballroom			
9:30 AM	10:30 AM	<b>Keynote 2 - Consequences of Sleep Apnea: The More We Dig, the More We Find</b> Dr. David Gozal, M.D., Herbert T. Abelson Professor, University of Chicago Grand Ballroom			
10:30 AM	11:00 AM	Health Break & Exhibits Open - Foyer & Trinity Ballroom			
11:00 AM	12:30 PM	Symposium 1 <b>Clinical and Basic Science Perspectives on Narcolepsy</b> Salon A	Symposium 2 <b>New Insights into the Physiology and Function of Sleep Spindles in Humans</b> Salon B	Symposium 3 <b>OSA Management in the Era of Individualized Care: Evidence-based Methods for Selecting Treatment Alternatives</b> York A/B	Respiratory Anatomy and Physiology Salon C/D 11:00-11:45 Titration Protocols Salon C/D 11:45-12:30
12:30 PM	1:30 PM	Lunch & Exhibits Open - Foyer & Trinity Ballroom			
1:30 PM	2:30 PM	<b>Keynote 3 - Sleep Disturbances, Obesity and Diabetes: Interacting Epidemics</b> Dr. Eve Van Cauter, Ph.D.; Frederick H. Rawson Professor, Sleep, Metabolism and Health Center (SMAHC), Department of Medicine, The University of Chicago Grand Ballroom			<b>The Effects of Opioids and Pain on Sleep</b> Bay Room 11:00-12:00
2:30 PM	3:00 PM	Health Break & Exhibits Open - Foyer & Trinity Ballroom			
3:00 PM	4:30 PM	Symposium 4 <b>Restless Legs Syndrome &amp; Periodic Limb Movements: Emerging Links with Vascular Disease</b> Salon A	Symposium 5 <b>Perioperative Complications of Obstructive Sleep Apnea</b> Salon B	Symposium 6 <b>The Challenge of Assessing Children's Sleep: Critical Analyses of Tools</b> York A/B	Workstation A1 and A2 - Advanced PAP Titration Salons C and D 2:45-4:15
4:30 PM	6:00 PM	Poster Presentations, Wine & Cheese and Exhibits Open - Foyer & Exhibit Hall			
6:00 PM	7:30 PM	<b>CSS Annual General Meeting</b> York A/B			

## SCHEDULE AT A GLANCE - Sunday, September 27, 2015

7:00 AM	5:00 PM	Registration Open			
Start	End	General Sessions			Technologist
6:30 AM	7:45 AM	<b>Sponsored Breakfast Symposium - Hosted by Devilbiss Healthcare Canada: Apnea Phenotype Clinical Challenges and Fixes</b> Speaker: Robert J. Thomas, MD Assistant Professor of Medicine, Harvard Medical School Physician, Associate Professor, Pulmonary, Critical Care & Sleep, Department of Medicine, Beth Israel Deaconess Medical Center Visiting Scientist, Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital Advanced RSVP Required - York A/B			
8:00 AM	9:00 AM	<b>Keynote 4 - Too Many Teens get too Little Sleep: Impact on Adolescent Mental and Physical Health</b> Dr. Dean W. Beebe, Ph.D., ABPP; Cincinnati Children's Hospital Medical Center  Grand Ballroom			
9:00 AM	10:00 AM	<b>Keynote 5 - Role of Hypocretin (Orexin) in Narcolepsy, Parkinson's and Normal Behavior</b> Dr. Jerome Siegel; UCLA, VAGLAHS  Grand Ballroom			
10:00 AM	10:30 AM	Health Break & Exhibits Open - Foyer & Exhibit Hall			
10:30 AM	12:00 PM	Oral Session 1 <b>Mechanisms of Sleep and Rhythms</b> Salon A	Oral Session 2 <b>Sleep in Medical Conditions</b> Salon B	Oral Session 3 <b>Sleep &amp; Cardiorespiratory Function</b> York A/B	<b>Workshop B: Scoring Bootcamp</b> Salon C/D 10:30-11:15
					<b>Troubleshooting</b> Salon C/D 11:15-11:45
12:00 PM	1:00 PM	Lunch & Exhibits Open - Foyer & Exhibit Hall			
1:00 PM	2:30 PM	Symposium 7 <b>Sleep-Disordered Breathing and Cardiometabolic Function</b> Salon A	Symposium 8 <b>Innovative Approaches to Better Reach Medical Patients with Insomnia</b> Salon B	Symposium 9 <b>Sleeping too Close Together: Paediatric Obesity and Obstructive Sleep Apnea</b> York A/B	<b>Guide d'exercice du Collège des médecins du Québec - l'apnée obstructive du sommeil et les autres troubles respiratoires du sommeil</b> Salon C/D 12:45-2:00
2:30 PM	4:00 PM	Symposium 10 <b>Breathing Across Sleep-wake States: From Basic Neurobiology to the Pathophysiology of Sleep-Disordered Breathing</b> Salon A	Symposium 11 <b>Recent Canadian Discoveries in Circadian Rhythms and Sleep</b> Salon B	Symposium 12 <b>Sleep in Pregnancy and the Postpartum</b> York A/B	<b>Workstation C: Expanded Montage</b> Salon C/D 2:00-2:45
					<b>EKG Arrhythmias</b> Salon C/D 2:45-3:15
4:00 PM	4:30 PM	Health Break and Exhibits - Foyer & Exhibit Hall			
4:30 PM	5:30 PM	<b>Keynote 6 - REM Sleep Behaviour Disorder: The Royal Path to Neuroprotective Treatment</b> Dr. Ron Postuma, MD, MSc, Associate Professor, Department of Neurology, Montreal General Hospital Grand Ballroom			

## SOCIAL EVENTS

### Opening Welcome Reception

Friday, Sept 25th from 6:00-7:30 pm

Holy Trinity Church Nave - directly adjacent to the Marriott Toronto Downtown Eaton Centre (conference hotel)



Wine featured by Pillitteri Estates Winery of Niagara, Canada (<http://www.pillitteri.com>). With four excellent wines to choose from, there will be a sommelier on hand from the winery to help you choose and tell you all about wines of the region.



Appetizers provided by The Raging Spoon.

### Wine and Cheese Poster Social

Saturday, Sept 26th from 4:30-6:00 pm

Conference Foyer & Exhibit Hall

Come out and meet the authors of over 100 posters on new scientific findings, network, discuss the buzz about the conference, and have some wine and cheese of course.

### CSS Annual General Meeting

Saturday, Sept 26th from 6:00-7:30 pm

Conference Centre: York A/B

Perhaps not a "social" event per se, but not to be missed for CSS members, and always entertaining.

### Student and Technologist British Pub Night Social at "The Maddy"

Saturday, Sept 26th from 8 pm - sometime before Sunday morning sessions

Madison Avenue Pub

14 Madison Avenue, The Annex

<http://www.madisonavenuepub.com/>

Advance Tickets – \$40 techs; \$20 students (Tickets onsite at the conference \$45)

*To purchase a ticket, visit the CSS Website and click on Social Events*

**Includes:** Cocktail party with pub grub and one alcoholic beverage; food will be served from 8:30-9:30 pm with a dessert tray at 10 pm.

Join technologists and students for a fun social night at a funky venue located only 4 subway stops from the Marriott Toronto Downtown. The pub has given us a section with a patio exclusive to us until 11 pm when it will open to the public. Everyone is welcome!



## FRIDAY, SEPTEMBER 25 PRE-CONFERENCE PROGRAMMING

6:30 AM - 6:30 PM **Registration Open** (Conference Foyer, Lower Level, bottom of the escalator)

### CME Program: Friday, September 25, 2015

#### Salons A/B

**NOTE:** This program is **not included** in general conference registration and requires **separate registration** and **an additional fee**.

- |             |  |
|-------------|--|
| 8:30-8:35   | <b>Greetings and Introductions</b><br><b>Dr. James MacFarlane</b>  |
| 8:35-9:10   | <b>A Review of Basic Sleep Physiology</b><br><b>Dr. Richard Horner</b><br>Understand the circuitry generating sleep-wake states and its organization across the day.   |
| 9:10-9:45   | <b>Sleep Requirement Across the Lifespan</b><br><b>Dr. Leila Kheirandish-Gozal</b>   |
| 9:45-10:20  | <b>An Introduction to the Concept of Insomnia</b><br><b>Dr. Charles Morin</b>  |
| 10:20-10:40 | <b>Health Break</b>  |
| 10:40-11:15 | <b>Beyond Sleep Hygiene: Sleep Tracking and CBT</b><br><b>Dr. Coleen Carney</b><br>There are many beliefs about Cognitive Behavioural Therapy for insomnia (CBT-I) that can get in the way of effective delivery. Some examples of these beliefs can include the belief that sleep diaries are necessarily unreliable or inferior to “objective” measures or that sleep diaries are unnecessary for effective CBT-I. Others include the belief that sleep hygiene is an effective treatment for chronic insomnia or that CBT-I is necessarily different when delivered in the context of other comorbid disorders. |
| 11:15-11:50 | <b>Sleep disruption and chronic pain</b><br><b>Dr. Gilles Lavigne</b>  |
| 11:50-12:25 | <b>Moody, sleepy or both? An overview of interactions between mood/anxiety disorders and sleep</b><br><b>Dr. Atul Khullar</b><br>An overview of interactions between mood/anxiety disorders and sleep.   |
| 12:30- 1:30 | <b>Lunch</b> (Included with registration)<br>Location: Foyer & Exhibit Hall  |

1:30-2:05 **Insomnia and shiftwork**  
Dr. Diane B. Boivin

2:05-2:40 **An update on medications for insomnia**  
Dr. James MacFarlane

2:45-5:45 **OPTION 1: CME Non-Rotating - CBT-I Workshop (Break in room)**

Location: Carleton Room

**Dr. Judith Davidson**

This workshop provides an introduction to the evidence-based and fun (!) treatment for insomnia, called cognitive behavioural therapy for insomnia, or “CBT-I.” It will update participants on practice guidelines for insomnia treatment, show the science and rationale for the main treatment components, and through exercises, allow participants to learn new skills that are directly applicable to their clinical work. This workshop is suitable for family physicians, psychiatrists, psychologists, nurse practitioners, nurses, counsellors and other clinicians interested in helping people with insomnia. Note: Often CBT-I workshops are 1-2 days in duration. This 3-hour workshop will focus on two key components of full CBT-I: stimulus control therapy and sleep restriction therapy. Together, these interventions comprise an abbreviated CBT-I that is suitable for use in primary care and other clinical settings.

2:40-3:00 **Health Break**  
Location: Foyer & Exhibit Hall

3:00-5:00 **OPTION 2: CME and Rotating Afternoon Sessions**

**Rotating Sessions (30 minutes each) :**

3:00-4:00 **A. Case Studies with Co-morbidities Using a Panel Style from Different Backgrounds**

Location: Salon A

**Panelists : Dr. James MacFarlane and Dr. Charles Samuels**

3:00-4:00 **B. Sleep-Specific Cognitive Behavioural Therapy**

Location: Salon B

**Dr. Coleen Carney**

Cognitive Behavioural Therapy was developed to address the empirically established causes of chronic insomnia: homeostatic and circadian disruption and/or hyperarousal. This session will review the causes of chronic insomnia, each of the major components of CBT-I and outline how each CBT-I technique addresses the cause of the chronic sleep disruption. In addition to didactic review, this very brief session will encourage attendee participation via experiential exercises and ongoing Q & A. Active learning: audience participation, Q & A.

Objectives:

1. Name the three causal factors for chronic insomnia
2. Link each CBT-I technique onto the causal factors for chronic insomnia.
3. List the steps involved in Stimulus Control, Sleep Restriction, Cognitive Therapy and Sleep Hygiene.

### Full Group :

#### 4:00-5:00 **The Alberta Medical Association Toward Optimized Practice (TOP) Insomnia Guideline Project: Updating Clinical Practice Guidelines for Primary Care**

Location: Salon A/B

**Dr. Charles Samuels**

Upon completion of this session the participant will:

- 1) have a clear understanding of the guideline development process.
- 2) be able adapt the guideline to their local needs and resources.
- 3) to effectively disseminate the guideline to primary care professionals in their community.
- 4) contribute feedback to the guideline for the next update.

#### 6:00-7:30 **Welcome Reception**

Location: Holy Trinity Church Nave

### Dental Program: Friday, September 25, 2015 (afternoon only)

Bay Room

#### 1:00-1:50 **Sleep apnea: cardiovascular consequences, co morbidity and mortality**

**Dr Douglas Bradley**

Obstructive sleep apnoea (OSA) is a common disorder in which repetitive apneas expose the cardiovascular system to cycles of hypoxia, exaggerated negative intrathoracic pressure, and arousals from sleep. These noxious stimuli can, in turn, trigger a cascade of mechanical, autonomic and inflammatory stimuli with adverse effects on the cardiovascular subsystem. These include increases in left ventricular afterload via the combined effects of increased system blood pressure and exaggerated negative intrathoracic pressure, depression of myocardial contractility, activation of the sympathetic nervous system, depression of parasympathetic activity, provocation of oxidative stress and systemic inflammation, activation of platelets, and impairment of vascular endothelial function. Epidemiological studies have demonstrated significant independent associations between OSA and hypertension, cardiac arrhythmias, heart failure and stroke. In randomized trials, treating OSA with continuous positive airway pressure lowered blood pressure, attenuated signs of early atherosclerosis, improved cardiac function in patients with heart failure and functional outcomes in patients with stroke. Present data therefore suggest that OSA increases the risk of developing several

cardiovascular diseases, and that its treatment has the potential to diminish such risk. However, large-scale randomized trials are required to determine, definitively, whether treating OSA improves cardiovascular outcomes.

- 1:50-2:40 **Differential diagnostic of OSA and oro-facial pain**  
Dr Gilles Lavigne
- 2:40-3:10 **Health Break**
- 3:10-4:00 **Maxillo-mandibular advancement: surgical treatment modality for OSA**  
Dr Tina Meisami  
A relatively large number of patients with severe OSA will not fully adhere to CPAP therapy presumably leaving them at continued high risk for cardiovascular events and a diminished quality of life. It is extremely important to have alternative therapies available that can effectively treat severe OSA over a patient's lifetime.  
Maxillomandibular Advancement (MMA) is an effective and safe alternative therapy to CPAP which produces substantial and sustained reductions in the AHI, diastolic BP, and subjective sleepiness with concomitant improvements in quality of life.  
This lecture will:  
1. Review the indications, technique and outcome for MMA surgery.  
2. Present cost benefit analysis of the patient versus surgeon perspective  
3. Demystify the information available to patients surrounding this surgical modality
- 4:00-4:50 **Efficacy of OA and combination therapy as an option**  
Dr Fernanda Almeida  
The oral appliance field involves many different types of mandibular advancement splints. This session will revise different mechanism of action and efficacy of different oral appliance designs. This session will review tools to help practitioners match therapy to patient preferences which may help identify the most appropriate treatment, with a greater likelihood of adherence.  
Upon completion, attendees should be able to:  
-Recognize the main appliance design differences which could impact appliance efficacy  
-Understand the current evidence of the efficacy of different appliance designs  
-Discuss the side effects of a variety of appliances designs and the influence on appliance selection.
- 4:50-5:15 **Open questions for speakers and conclusions**
- 6:00-7:30 **Welcome Reception**

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## Technologist Program: Friday, September 25th, 2015

Salons C/D

### 8:30-9:15 **Movement Disorders and Parasomnias**

**Dr. Brian Murray**

Discussion of certain types of movement disorders in sleep and Parasomnias. Diagnosis and treatment options, as well as differential diagnosis.

#### OBJECTIVES

1. To understand the basic clinical features of common sleep movement disorders and parasomnias
2. To identify polysomnographic features of these conditions
3. To develop a good approach to handling these situations

### 9:15-10:15 **Current Medications and their Effects**

**Jamie MacFarlane**

Affects of medications on sleep and wake. How medications can affect or alter sleep.

### 10:15-10:30 **Health break**

### 10:30-11:00 **Credentialling and Exam Prep**

**Helen Driver & Theresa Krupski**

The BRPT exam is still the gold standard for credentialling RPSGT's in Canada. The President of the BRPT will discuss the paths to RPSGT/PSGT and CCSH credentials.

### 11:00-11:45 **Paediatric Collection/Analysis**

**Colin Massicotte & Adele Baker**

Paediatric sleep disorders are on the rise. Is your lab equipped to accommodate these patients. Discussion of how to collect and analyze paediatric sleep studies. Learning Objectives: At the conclusion of this activity, participants will be able to: Develop trusting relationship with pediatric patient. Identify the indications and equipment requirements for pediatric studies. Recognize the ways in which acquisition and scoring of pediatric PSG data is different.

### 11:45-12:30 **Level 3 Testing**

**Laree Fordyce**

Level 2/3 studies are commonplace in certain provinces in Canada. Are we going to see a shift from Level 1 across Canada. How do level 2/3 differ from level 1. Collection and analysis of Level 2/3 studies will be discussed. Objectives: 1. Discuss the transition process from level 1 to level 3, in Alberta. 2. Identify the advantages and disadvantages of using level 3 vs level 1.

### 12:30-1:30 **Lunch**

1:30-2:00 **RPSGTs – A critical link to PAP therapy success**

**Adele Baker**

Objectives • The evolving role of the sleep technologist with respect to PAP therapy • A technologist's approach to introducing and initiating PAP therapy in the sleep lab • Special considerations for initiating a pediatric patient • A technologist's approach to PAP therapy assessment and adherence troubleshooting • Special considerations for troubleshooting adherence in the pediatric patient.

2:00-3:00 **Sleep Apps**

**Michael Eden**

Learning objectives: 1. To identify and understand the advantages and limitations of sleep tracking apps 2. To be able to utilize pertinent data from sleep tracking apps to enhance a patient's subjective sleep history 3. To be able to extract meaningful data from both wearable and smartphone apps

3:00-3:15 **Health break**

3:15-4:00 **Narcolepsy**

**Dr. Indra Narang**

Discussion about diagnosis, treatment and outcomes for Narcolepsy in children and adults. Learning Objectives: 1. To describe the clinical characteristics of childhood narcolepsy. 2. To discuss the diagnosis and management of children with suspected narcolepsy.

4:00-5:00 **Case Reports**

**Dr. Lysa Boisse Lomax & Dr. Eileen Sloan**

Interesting cases from inside the sleep laboratories in Canada. Presentation of cases outlining how the patients presented, testing completed, diagnosis treatment option/outcomes. Discuss four case studies: Neurology (3 cases) and Psychiatry (1 case). Learning Objectives: 1. Identify unusual EEG patterns in seizure disorder and in Parkinson's disease. 2. Review patient management in complex cases including dementia 3. Discuss technologist responses in crisis situations (Help, what do I do now?)

6:00-7:30 **Welcome Reception**

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## Student Program: Friday, September 25, 2015

York A/B

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|-------------|--|
| 9:30-9:45   | <b>Opening remarks</b>   |
| 9:45-10:30  | <p><b>Sleep in Preindustrial Societies Under Evolutionarily Relevant Conditions</b><br/> <b>Dr. Jerry Siegel</b><br/> Goals:<br/> 1. Understand how human sleep duration in “modern” society has changed from that in “preindustrial” cultures.<br/> 2. Understand how light exposure in preindustrial cultures differs from that in “modern” society.<br/> 3. Understand how temperature affects the timing of sleep.</p> |
| 10:30-10:45 | <p><b>Abstract Presentation: "Cortical thinning mediates age-related changes in NREM sleep oscillations during adulthood "</b><br/> Jonathan Dubé - Travel Award 2014</p>  |
| 10:45-11:00 | <p><b>Abstract Presentation: "Activation of the REM sleep circuit induces cataplexy in wild-type mice"</b><br/> Zoltan Torontali</p>   |
| 11:00-11:15 | <b>Health break</b>  |
| 11:15-12:00 | <p><b>Abstract Presentation: "Neuroimaging of sleep and sleep disorders"</b><br/> Thanh Dang-Vu, MD PhD Roger Broughton Young Investigator Award Winner 2015</p>   |
| 12:00-1:30  | <p><b>Lunch with mentors</b><br/> Applying to a post-doc, academic or private position</p>   |
| 1:30-1:45   | <p><b>CSS and Trainee: Future Projects</b><br/> Samuel Laventure &amp; Kevin Grace</p>   |
| 1:45-2:00   | <p><b>Abstract Presentation: "Endogenous Cholinergic Input to the Pontine REM Sleep Generator Is Not Required for REM Sleep to Occur"</b><br/> Kevin Grace - Outstanding Student Achievement Award Winner 2015</p>   |
| 2:00-2:15   | <p><b>Abstract Presentation: "Sleep EEG coherence during middle years of life"</b><br/> Maude Bouchard - Travel Award 2014</p>   |

- 2:15-2:45      **Abstract Presentation : Clinical Cases in Paediatric Sleep Medicine:  
Adults are not just big children**  
**Dr. Sundeep Bola, MD, FRCP(C)**  
During this presentation, I will explore some common clinical presentations in paediatric sleep medicine from presentation through to treatment. In doing so, we will examine how the approach to sleep disorders changes along the lifespan.
- 2:45-3:00      **Health Break**
- 3:00-5:00      **Rotating Workshops: 1) Sleep research with rodents**  
**Dr. Valérie Mongrain & Marlene Freyburger**
- 3:00-5:00      **Rotating Workshops: 2) EEG/fMRI sleep studies**  
**Stuart Fogel**
- 6:00-7:30      **Welcome Reception**
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## SATURDAY, SEPTEMBER 26 PROGRAMMING

### SCIENTIFIC PROGRAM: Saturday, September 26, 2015

6:30am-6:30pm **Registration Desk Open**  
Location: Conference Level Entry

8:00 -8:45 **Opening Ceremonies and Awards**  
Location: Grand Ballroom

8:45 -9:30 **KEYNOTE 1 : From a Sleeping Dog to National Programs: Evolution of Sleep and Breathing in Canada**  
Location: Grand Ballroom  
**Dr. Eliot A. Phillipson**

9:30-10:30 **KEYNOTE 2 : Consequences of Sleep Apnea: The More We Dig, the More We Find**  
Location: Grand Ballroom  
**Dr. David Gozal, M.D**

10:30-11:00 **Health Break & Exhibits Opening**  
Location: Foyer & Exhibit Hall

11:00-12:30 **SYMPOSIUM 1 : Clinical and Basic Science Perspectives on Narcolepsy**  
Location: Salon A

#### Summary:

Advances in the understanding of the basic biology of narcolepsy and cataplexy have been dramatic and have direct implications to their clinical diagnosis and management. The goals of this symposium are to review the clinical symptomatology of narcolepsy with cataplexy, discuss animal models of this disorder, update understanding of the neural circuit implicated, and to discuss novel treatment options.

#### Learning Objectives:

1. Highlight the most recent basic science and clinical data describing the mechanistic nature of the pathophysiology of narcolepsy and cataplexy.
2. Describe current and developing diagnosis and treatment strategies for sleepiness and cataplexy in narcolepsy.
3. Understand the link between H1N1, H1N1 vaccination and narcolepsy onset in children and adults

Chairperson: Brian Murray, Sunnybrook Hospital

Speaker 1: Brian Murray, Sunnybrook Hospital

Title: H1N1 and Narcolepsy

Speaker 2: Dr. Michael Thorpy, Professor of Clinical Neurology, The Saul R. Korey Department of Neurology

Title: Diagnostic Criteria and Subtleties in the Clinical Diagnosis of Narcolepsy

Speaker 3: Jerry Siegel, UCLA, USA

Title: Mechanisms of Narcolepsy in Humans and Animals

Speaker 4: John Peever, University of Toronto

Title: Brain Circuitry Underlying Sleepiness and Cataplexy in Narcolepsy

## 11:00-12:30 **SYMPOSIUM 2 : New Insights into the Physiology and Function of Sleep Spindles in Humans**

Location: Salon B

### Summary:

This symposium will interest a broad audience because it not only discusses the neural control of sleep spindles, but also highlights how spindles impact brain systems involved in regulating synaptic plasticity, memory, motor control in young and older adults and in disordered sleep. The presentations include research from entire brain systems (human EEG and neuroimaging) to discrete cellular and networks (intracerebral recordings), and thus be appealing to a wide audience including both clinicians and researchers interested in clinical and fundamental aspects of sleep research.

### Learning Objectives:

1. Highlight the methodological challenges of spindle characterization and their implications for basic and clinical research.
2. Present the current state of knowledge about the neural systems involved in the generation or modulation of human sleep spindles.
3. Summarize new data concerning the functional and clinical significance of sleep spindles.

Chairperson: Stuart Fogel, Brain & Mind Institute, Western University

Co-Chairperson: Thanh Dang Vu Center for Studies in Behavioral Neurobiology, Perform Center and Department of Exercise Science, Concordia University, Montreal

Speaker 1: Simon Warby, Department of Psychiatry, Université de Montréal

Title: Methodological Challenges in Sleep Spindle Detection

Speaker 2: Birgit Frauscher, Montreal Neurological Institute and Hospital, McGill University

Title: The Origin of Scalp-Recorded Spindles: Insights from Intracranial Recordings

Speaker 3: Stuart Fogel, Brain & Mind Institute, Western University, London, ON

Title: The Role of Sleep Spindles in Memory Consolidation in the Young and Elderly

Speaker 4: Thanh Dang Vu, Center for Studies in Behavioral Neurobiology, Perform Center and Department of Exercise Science, Concordia University, Montreal

Title: Sleep Spindles in the Development and Treatment of Insomnia

11:00-12:30 **SYMPOSIUM 3 : OSA Management in the Era of Individualized Care: Evidence-based Methods for Selecting Treatment Alternatives**

Location: York A/B

**Summary:**

The symposium considers the current status of therapy for OSA in view of the chronicity and long-term health risks of the disease. Most sleep centres take what can be best described as a “one size fits all” approach, prescribing CPAP even though the poor compliance rate means that a sizable proportion of patient population will not receive adequate therapy. The appearance of alternative therapy, albeit less efficacious, now provides the opportunity for a new approach. Management decisions that seek to optimize therapy initially will likely provide superior long-term outcomes if applied judiciously, and based upon the results of evidence-based testing. We feel that this message, while well established in other medical specialties, is just beginning to take hold in sleep medicine.

The symposium will provide a comprehensive review of the literature relating to current therapies (CPAP, OAT and UHNS) and examine in-depth methods of patient selection for each. First hand clinical experience will be presented and juxtaposed to cutting edge clinical trial results relating to predicting therapeutic outcome. Deficiencies and limitations of currently available methods will be highlighted and future trends will be discussed.

Cost effective, individualized care of patients with OSA is a high priority given the high prevalence and mortality risk of the disease. The symposium will stimulate healthy debate about these issues and provide a focus for future research.

**Learning Objectives:**

1. To understand the need for evidence-based selection of patients for OSA therapy
2. To evaluate the use of DISE and RCMP technologies in selecting patients for OSA therapy
3. To appreciate the emerging field of cost-effective, home sleep testing in identifying favorable candidates for oral appliance therapy.

Chairperson: Colin Shapiro, PhD, FRCPC, University of Toronto, Sleep & Alertness Clinic, Toronto; Sleep Research Laboratory, Toronto Western Hospital; Youthdale Child & Adolescent Sleep Clinic, Toronto

Speaker 1: Marc Baltzan, McGill Faculty of Medicine; Mount Sinai Hospital, Montreal  
Title: Global View of the Current Status of Sleep Apnea Therapy

Speaker 2: Charles Samuels, University of Calgary; Centre for Sleep and Human Performance

Title: Treatment of OSA: An Individualized Approach to Therapy  
 Speaker 3: John Remmers, University of Calgary  
 Title: Clinical Trial Results Using an In-Home Computer Controlled Mandibular Positioner (CCMP)

**12:30-1:30 Lunch & Exhibit Hall**

Location: Foyer & Exhibit Hall

**1:30-2:30 KEYNOTE 3 : Sleep Disturbances, Obesity and Diabetes: Interacting Epidemics**

Location: Grand Ballroom

**Dr. Eve Van Cauter, PhD**

**2:30-3:00 Health Break & Exhibits**

Location: Foyer & Exhibit Hall

**3:00-4:30 SYMPOSIUM 4 : Restless Legs Syndrome & Periodic Limb Movements: Emerging Links with Vascular Disease**

Location: Salon A

**Summary:**

This symposium will explore emerging new data that supports a significant association between PLMs, RLS and vascular disease. While OSA has traditionally been the focus of the majority of studies examining sleep disorders in the context of vascular disease, more recent work strongly suggests an important role for PLMs and RLS. Our symposium will shed light on this underexplored area of sleep medicine, and increase recognition among clinicians and researchers for this novel and clinically-relevant area of investigation. Our speakers will include researchers who have published in this area of work (e.g. Drs. B. Murray, T. Kendzerska, M. Pennestri, M. Boulos) and who also share a passion for further exploration of this intriguing area of study.

**Learning Objectives:**

1. To review the pathophysiological mechanisms that may link RLS / PLMs with vascular events and mortality.
2. To examine the epidemiological evidence that demonstrates an association between RLS / PLMs with cardiovascular and cerebrovascular disease, and mortality.
3. To present neuroimaging data that supports the link between RLS/PLMs and vascular disease.

Chairperson: Mark Boulos, University of Toronto and Sunnybrook Health Sciences Centre

Co-Chairperson: Tetyana Kendzerska University of Toronto

Speaker1: Brian Murray, University of Toronto and Sunnybrook Health Sciences Centre

Title: Introduction to RLS/PLMs.

Speaker 2: Marie-Helene Pennestri, Hôpital Rivière-des-Prairies



Title: Pathophysiological Mechanisms Linking RLS/PLMs with Vascular Disease and Mortality.

Speaker 3: Tetyana Kendzerska, University of Toronto

Title: Epidemiological Evidence Linking RLS/PLMs with Vascular Disease and Mortality.

Speaker 4: Mark Boullos, University of Toronto and Sunnybrook Health Sciences Centre

Title: Neuroimaging Correlates of RLS / PLMs.

Speaker 5: Brian Murray, University of Toronto and Sunnybrook Health Sciences Centre

Title: Conclusion and Summary

### 3:00-4:30 **SYMPOSIUM 5 : Perioperative Complications of Obstructive Sleep Apnea**

Location: Salon B

Summary:

The perioperative complications of obstructive sleep apnea are an area of much current interest. Drs. Horner, Chung and Fleetham are experts in this field and have all agreed to present.

Learning Objectives:

1. Understand the effects of sleep and sedation on ventilatory drive
2. Understand how to identify patients with obstructive sleep apnea preoperatively and prepare them for anesthesia
3. Understand how to manage patients with obstructive sleep apnea during and after surgery

Chairperson: John Fleetham, University of British Columbia

Speaker 1: Richard Horner, University of Toronto

Title: Neural Mechanisms of Sleep and Sedation-Induced Respiratory Depression

Speaker 2: Frances Chung, University of Toronto

Title: Preoperative Identification and Preparation of Patients with Obstructive Sleep Apnea

Speaker 3: John Fleetham, University of British Columbia

Title: Perioperative and Postoperative Management of Patients with Obstructive Sleep Apnea

### 3:00-4:30 **SYMPOSIUM 6 : The Challenge of Assessing Children's Sleep: Critical Analyses of Tools**

Location: York A/B

Summary:

Rigorous methods in the assessment of sleep are crucial to understand the functions of sleep and its impact on daytime functioning, as well as to efficiently diagnose and treat sleep disorders. Over the last two decades, a number of guidelines have been published on the assessment of adult sleep but minimal work has been undertaken with children so that sleep professionals are sometimes uncertain about valid and reliable measures of children's sleep. This is tragic, given the importance of sleep for brain maturation,

cognitive development and adaptive behaviour in children. Consequently, there is a critical need to gather and analyze evidence on sleep assessment tools in children. Recently, Canadian sleep researchers and clinicians have actively studied forms of sleep assessment. It is timely to share the results of their work with sleep clinicians, researchers, technologists and trainees so that the field of children's sleep can be advanced.

**Learning Objectives:**

1. Gain significant knowledge about available efficient and accurate tools to assess sleep quality and quantity in infants, toddlers, preschoolers and school-aged children.
2. Be able to select sleep assessment tools that better serve their own purposes.
3. Learn strategies to prevent sleep deprivation in children and be provided with evidence-based guidelines to evaluate and treat pediatric sleep disorders.

Chairperson: Roger Godbout, Université de Montréal

Speaker 1: Wendy Hall, University of British Columbia, School of Nursing

Title: A Comparison of Actigraphy and Diary Data for Documenting Sleep Behaviours in Infants

Speaker 2: Graham J. Reid, Western University, Departments of Psychology and of Family Medicine

Title: Night-Waking behaviors in Preschool-Aged Children

Speaker 3: Penny V. Corkum, Dalhousie University, Department of Psychology

Title: Sleep Assessment in School-Aged Children

Speaker 4: Roger Godbout, Université de Montréal, Department of Psychiatry

Title: Sleep Assessment in Children with Mental Health Disorders

Speaker 5: Reut Gruber, McGill University, Department of Psychiatry

Title: CSS Position Statement on Pediatric Sleep

**4:30-6:00 Wine and Cheese Poster Presentations & Exhibit Hall**

Location: Foyer & Exhibit Hall

**6:00-7:30 Canadian Sleep Society Annual General Meeting**

Location: York A/B

CSS members only

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## Dental Program: Saturday, September 26, 2015

11:00-12:00 **The Effects of Opioids and Pain on Sleep**

Location: Bay Room

**Dr Gilles Lavigne**

12:00-1:30 **Dental Group General Meeting**

Location: Bay Room

2:45-3:30 **Quality of Life Measurements in OAT**

Location: Bay Room

**Dr. Leslie Dort**

Quality of life instruments (questionnaires) can be a valuable tool, in addition to sleep testing, to assess clinical outcomes with oral appliance therapy patients. This presentation is intended to introduce the concept of quality of life questionnaires and describe their possible uses in a dental sleep medicine practice.

3:30-4:45 **How to Navigate the Sea of Appliances in the Market Today**

Location: Bay Room

**Dr Fernanda Almeida**

A discussion on the main types of appliances and their characteristics and a question and answer period

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## Technologist Program: Saturday, September 26, 2015

### 11:00-11:45 **Respiratory Anatomy and Physiology**

Location: Salon C/D

**Debra Medin, RPSGT**

Basic to Advanced discussion of the respiratory system and how our brains help to regulate blood gas exchange. Affects of OSA/CSA/Mixed apnea and treatment options to be discussed. At the conclusion of the session, the attendee will: 1. List the major components of the respiratory system. 2. Explain the basic mechanics of breathing including factors related to airway resistance, thoracic compliance, and the lung parenchyma. 3. Describe how gas exchange occurs in the lungs and the effect of the oxyhemoglobin dissociation curve. 4. Relate the mechanics of breathing to pathophysiology and sleep breathing disorders; discuss therapies for correction of sleep disordered breathing. 5. Discuss the monitors of breathing that are used in the sleep lab and what the values mean.

### 11:45-12:30 **Titration Protocol**

Location: Salon C/D

**Debra Medin, RPSGT**

Discussion about titration of PAP devices. How the devices treat sleep disordered breathing in the lab and clinical outcomes. At the conclusion of the session, the attendee will: 1. Discuss the various modes and parameters of noninvasive positive pressure therapy used to treat sleep disordered breathing. 2. Describe the proper application of the various modes as per the AASM guidelines. 3. Given a set of conditions observed in the sleep lab setting, explain how one might go about fine-tuning and/or troubleshooting the parameters to achieve better outcomes.

### 1:30-2:30 **Les avancements thérapeutiques dentaires pour les troubles du sommeil**

Location: York A/B

**Dr. David Côté**

Objectifs de la présentation Cette présentation vise à familiariser les praticiens avec les concepts utilisés dans le traitement de l'apnée du sommeil et du ronflement, à l'aide d'appareils dentaires. Les indications de traitement, les effets secondaires, les types d'appareils disponibles, même ceux disponibles en vente libre, seront le sujet de la discussion.

## Workstation A1 - Advanced PAP Titration

**Chair: Michael Eden Presenter: Doug Scullion, ResMed**

## Workstation A2 - Advanced PAP Titration

**Chair: Helen Driver Presenter: Darren Life, Philips Respironics**

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## SUNDAY, SEPTEMBER 27 PROGRAMMING

### SCIENTIFIC PROGRAM: Sunday, September 27, 2015

- 6:30am-6:30pm **Registration Desk Open**  
Location: Conference Level Entry
- 8:00-9:00 **KEYNOTE 4 : Too Many Teens get too Little Sleep: Impact on Adolescent Mental and Physical Health**  
Location: Grand Ballroom  
**Dr. Dean W. Beebe, Ph.D.**
- 9:00-10:00 **KEYNOTE 5 : Role of Hypocretin (Orexin) in Narcolepsy, Parkinson's and Normal Behavior**  
**Dr. Jerome Siegel**
- 10:00-10:30 **Health Break & Exhibits**  
Location: Foyer & Exhibit Hall
- 10:30-12:00 **Oral Session 1: Mechanisms of Sleep and Rhythms**  
Location: Salon A  
Chairs : Lia Oskui and Ben Rusak
- Denise Christina Jarrin  
*Socioeconomic Gradient Exists for PSG-derived Sleep in Children and Adolescents.*  
Benjamin Gaudet-Fex, Université de Montréal  
*Topography of the quantitative REM sleep EEG in normal aging.*  
Samuel Laventure, Université de Montréal  
*The causal role of NREM2 sleep in sequential motor memory consolidation.*  
Kevin Grace, University of Toronto, Department of Medicine  
*Endogenous Cholinergic Input to the Pontine REM Sleep Generator Reinforces, but Does Not Initiate, Transitioning into REM Sleep.*  
Valya Sergeeva, Brain & Mind Institute, Department of Psychology, Western University  
*Fast sleep spindles in SWS but not sleep quality relate to verbal cognitive abilities.*  
Jeremy Viczko, Western University/Brain and Mind Institute  
*Rhythm, routine, and reason: Circadian markers relate to intellectual ability.*



## 10:30-12:00 **Oral Session 2: Sleep in Medical Conditions**

Location: Salon B

Chairs : Kevin McDonald and Jimmy Fraigne

Marie-Pierre Tessier, Sleep Laboratory & Clinic, Hôpital Rivière-des-Prairies, Montréal, Canada; Centre de Recherche, Hôpital Rivière-des-Prairies, Montréal, Canada; Department of Psychiatry, Université de Montréal, Montréal, Canada

*Heart rate variability during wake and sleep in typically developing and autistic individuals: Effects of age range.*

Roger Godbout, Department of Psychology, Université du Québec à Trois-Rivières, Trois-Rivières Qc

*Relationships between children sleep disturbances and placement conditions: A foster care study.*

Rébecca Robillard, Institute of Mental Health Research, University of Ottawa

*Circadian desynchrony in adolescents and young adults with depression*

Zoltan Torontali, University of Toronto

*Activation of the REM sleep circuit induces cataplexy in wild-type mice*

Pierre-Olivier Gaudreault, Center for Advanced Research in Sleep Medicine

*Are age-related modifications in spindle characteristics linked to markers of white matter integrity?*

Soufiane Boucetta, Concordia University

*Brain Structural Abnormalities associated with Rapid Eye Movement Sleep Behaviour Disorder in Parkinson's disease*

## 10:30-12:00 **Oral Session 3: Sleep & Cardiorespiratory Function**

Location: York A/B

Chairs : Garret Horton and Richard Horner

Gaspard Montandon, Departments of Medicine and Physiology, University Of Toronto

*EEG signatures associated with sedation and respiratory depression by morphine in young patients following elective surgery*

Debra Medin, RPSGT

*Impact of Standardized Phone Follow-up on PAP Adherence in Obese Adolescent Patients with Obstructive Sleep Apnea*

Simon Lui, University of Toronto, Department of Cell and Systems Biology

*Intermittent optogenetic activation of the locus coeruleus triggers respiratory motor plasticity*

Mark Boullos, University of Toronto and Sunnybrook Health Science Centre

*Simplifying the Diagnosis of Sleep Apnea after Stroke: Evaluation of Five Simple Screening Tools*

Thirumagal Kanagasabai, York University

*Sleep duration and cardiometabolic risk scores: a cross-sectional study*

Andrée-Ann Baril, Center for Advanced Research in Sleep Medicine, Hôpital du Sacré-Coeur de Montréal

*White Matter Microstructural Changes in Obstructive Sleep Apnea*

**12:00-1:00 Lunch & Exhibits**

Location: Foyer & Exhibit Hall

**1:00-2:30 SYMPOSIUM 7 : Innovative Approaches to Better Reach Medical Patients with Insomnia**

Location: Salon A

**Summary:**

This symposium aims at informing clinicians and researchers about the need to develop innovative approaches to increase patients' access to CBT for insomnia in medical settings. It will inform the audience about some alternatives that have been tested targeting either the patients directly (e.g., video- and web-based interventions) or indirectly through their health care providers. The symposium will also discuss empirical evidence supporting such approaches, the challenges associated with their implementation in clinical settings and some areas for future research.

**Learning Objectives:**

1. To understand the extent to which insomnia is an unmet need in patients with medical comorbidity.
2. To learn about strategies to increase patients' access to cognitive-behavioural therapy (CBT) for insomnia in medical settings.
3. To have knowledge about some barriers and solutions to make CBT for insomnia more accessible for patients with various medical conditions.

Chairperson: Josée Savard, School of Psychology, Université Laval, Centre de Recherche du Chu de Québec and Centre de Recherche sur le Cancer, Université Laval

Speaker 1: Judith Davidson, Kingston Family Health Team and Queen's University Departments of Psychology and Oncology, Kingston, Ontario

Title: Reversing Insomnia in Primary Care

Speaker 2: Marie-Christine Ouellet, School of Psychology, Université Laval, Centre Interdisciplinaire de Recherche en Réadaptation et Intégration Sociale (CIRRS)

Title: Adapting Cognitive-Behaviour Therapy for insomnia to the Context of Traumatic Brain Injury

Speaker 3: Josée Savard, School of Psychology, Université Laval, Centre de Recherche du Chu de Québec and Centre de Recherche sur le Cancer, Université Laval

Title: Towards the Implementation of a Stepped-Care Approach to Treat Insomnia in Cancer Patients

**1:00-2:30 SYMPOSIUM 8 : Sleep-Disordered Breathing and Cardiometabolic Function**

Location: Salon B

**Summary:**

Clinicians involved in the care of patients with sleep disorders and/or pregnancy, cardiometabolic and renal disorders; basic scientists interested in mechanisms of sleep-disordered breathing and cardiometabolic interactions; sleep technologists seeking to

gain a broader understanding of sleep and cardiometabolic function in diverse clinical populations.

Learning Objectives:

1. Describe the evidence linking sleep-disordered breathing during pregnancy to adverse pregnancy outcomes including gestational hypertension-pre-eclampsia
2. Discuss current data on the mechanisms underlying the interactions between sleep-disordered breathing and hypertension, metabolic dysfunction and fluid overload states
3. Describe current knowledge concerning the prevalence, clinical significance and implications for patient care of sleep-disordered breathing in adult diabetes, congestive heart failure, renal failure and other conditions

Chairperson: John Kimoff, McGill University

Speaker 1: John Kimoff, McGill University

Title: Sleep-Disordered Breathing during Pregnancy: Implications for Maternal and Fetal Outcomes

Speaker 2: Sushmita Pamidi, McGill University

Title: Sleep Apnea and Metabolic Dysfunction

Speaker 3: Douglas Bradley, University of Toronto

Title: Sleep-Disordered Breathing in Heart and Renal Failure

1:00-2:30

## **SYMPOSIUM 9 : Sleeping too Close Together: Paediatric Obesity and Obstructive Sleep Apnea**

Location: York A/B

Summary:

Traditionally, childhood OSA is thought to be prevalent in 1-4% of children. With the epidemic of obesity, there is a paradigm shift in the epidemiology and pathophysiology of childhood OSA with approximately 30% of all obese children and adolescents believed to have OSA. Many obese children will not be diagnosed with OSA, in part due to a lack of awareness of OSA as a co-morbidity of obesity. Moreover, OSA in the context of obesity is increasingly recognized to promote cardio-metabolic dysfunction with increasing health care utilisation. As such, there is an urgent need for timely accurate diagnosis and therapeutic intervention of OSA. Moreover, a significant number of obese children with OSA will transition to adulthood which poses particular challenges for adult sleep specialists which will be discussed during this symposium.

Learning Objectives:

1. Appreciate the epidemiology, pathophysiology and diagnosis of obesity related OSA
2. Understand the management options for obesity related OSA including adenotonsillectomy, positive airway pressure and bariatric surgery
3. To discuss the short and long-term challenges faced by adult sleep specialists as obese adolescents with OSA transition to adulthood.

Chairperson: Indra Narang, The Hospital for Sick Children, Canada

Co-Chairperson: Dr Suhail Al-Saleh, The Hospital for Sick Children

Speaker 1: Manisha Witmans, University of Alberta Title: The Changing Paradigm of Pediatric OSA: Obesity Related OSA

Speaker 2: Dr Al-Saleh, The Hospital for Sick Children Title: Diagnosing OSA- Risk Factors and Anthropometry

Speaker 3: Dr Reshma Amin, The Hospital for Sick Children Title: Medical and Surgical Management of Obesity Related OSA

Speaker 4: Indra Narang, The Hospital for Sick Children, Toronto Title: OSA - Not an Innocent Bystander in Obese Adolescents

Speaker 5: Clodagh Ryan, Toronto General Hospital Title: Paediatric OSA - Challenges for Adult Sleep Specialists

2:30-4:00 **SYMPOSIUM 10 : Breathing across Sleep-Wake States: From Basic Neurobiology to the Pathophysiology of Sleep-disordered Breathing**

Location: Salon A

**Summary:** By gathering scientists from Toronto, Canada, and the USA, the proposed symposium is unique because it promotes local and international research and covers a broad area of interest spanning from basic neurobiology to clinical sleep research. Such diversity of participants aims to foster discussion to understand how breathing is generated and how it may fail during sleep in patients with sleep-disordered breathing. The symposium's theme is also consistent with the topics addressed by guest speakers Drs. Elliot Philipson and David Gozal. Also, the topics covered in this symposium have never been explored in previous Canadian Sleep Society conferences. Overall, the fact that the symposium is composed of junior and senior investigators will strongly contribute to the scientific quality and excellence of this symposium.

**Learning Objectives:**

1. To discover recent advances elucidating the basic mechanisms underlying the neural control of breathing and its modulation by sleep-wake states.
2. To explore clinical studies looking at the link between brain arousal and breathing, especially in patients presenting sleep-disordered breathing and respiratory depression by drugs.
3. To discuss how knowledge can be translated from basic research to clinical studies to better understand sleep-disordered breathing, such as CCHS and Central Sleep Apneas.

Chairperson: Gaspard Montandon, University of Toronto

Co-Chairperson: Indra Narang The Hospital for Sick Children

Speaker 1: Jack Feldman, David Geffen School of Medicine, UCLA  
Title: Optogenetic Control of the Respiratory Network in Vivo

Speaker 2: Silvia Pagliardini, University of Alberta

Title: Inspiratory and Expiratory Control of Breathing

Speaker 3: Gaspard Montandon, University of Toronto

Title: State-dependent Modulation of the Respiratory Network in Vivo

Speaker 4: Indra Narang, The Hospital for Sick Children

Title: Sleep-disordered Breathing in Children

2:30-4:00

## **SYMPOSIUM 11 : Recent Canadian Discoveries in Circadian Rhythms and Sleep**

Location: Salon B

### Summary:

Discoveries in circadian rhythm research, especially those concerning the central nervous system, continue to shape the understanding of how sleep is regulated because of the intimate relationship between circadian and sleep physiology. In parallel, the molecular clockwork has been increasingly linked to neuronal and behavioral plasticity that has been previously recognized to be associated with sleep. The symposium will feature new data obtained from in vitro studies as well as from research in flies, rodents and humans regarding both the regulation and the role of the circadian timing system. The last two presentations of the symposium will also discuss the implication of these 'circadian' findings for sleep regulation.

### Learning Objectives:

1. To emphasize the strength of using a diversity of molecular and behavioral techniques to understand the functioning of the circadian timing system.
2. To highlight the state of the knowledge in circadian rhythm research and the important contribution of the Canadian research community to it.
3. To present novel manners by which the molecular clockwork and the circadian timing system contribute to the regulation of sleep.

Chairperson: Valerie Mongrain, Department of Neuroscience, Université de Montréal

Speaker 1: Joel Levine, Department of Biology, University of Toronto Mississauga

Title: Fly Clockwork and Social Behavior

Speaker 2: Denise D. Belsham, Department of Physiology, University of Toronto

Title: Resolving Palmitate-mediated Alterations in Circadian Rhythms with Omega-3 Fatty Acid DHA in Hypothalamic Neuronal Models

Speaker 3: Hai-ying Mary Cheng, Department of Cell and Systems Biology, University of Toronto

Title: Rodent SCN Molecular Clockwork

Speaker 4: Valérie Mongrain, Department of Neuroscience, Université de Montréal

Title: Clock Transcription Factors Regulate Synaptic Adhesion Molecules Involved in Sleep Regulation

Speaker 5: Diane Boivin, Department of Psychiatry, McGill University

Title: Entrainment of Peripheral Molecular Rhythms in Humans

## 2:30-4:00 **SYMPOSIUM 12 : Sleep in Pregnancy and the Postpartum**

Location: York A/B

### Summary:

This symposium will provide both depth and breadth in topics presented including sleep and biomarkers of inflammation, sleep and breathing in pregnancy, sleep and mental health outcomes in perinatal women, and the most common sleep disorders in pregnancy including restless legs syndrome and insomnia. Data to be presented include objective and subjective measures of sleep, evaluations of interventions to improve sleep, impact on daytime function of sleep loss, and health outcomes related to sleep loss in the perinatal period.

### Learning Objectives:

1. To understand characteristics of sleep during pregnancy and the postpartum.
2. To present and discuss four recent studies of sleep in pregnancy and the postpartum examining the effects of sleep loss on women's health outcomes, including immune function, blood pressure, and mental health.
3. To discuss the implications of study findings on development of interventions to improve sleep in pregnancy and the postpartum.

Chairperson: Robyn Stremmler, University of Toronto and The Hospital for Sick Children

Speaker 1: Michele Okun, University of Colorado, Colorado Springs

Title: Pregnancy-related Sleep Disturbances and Inflammatory Cytokines are Associated with Adverse Pregnancy Outcomes

Speaker 2: Louise O'Brien, University of Michigan

Title: Impact of PAP on Maternal Blood Pressure during Pregnancy

Speaker 3: Katherine Sharkey, Brown University and Rhode Island Hospital

Title: Sleep, Depression and Stress in the Mother-Infant Dyad

Speaker 4: Robyn Stremmler, University of Toronto and The Hospital for Sick Children

Title: Prevalence and Predictors of Insomnia and Restless Legs Syndrome and Relationship to Health Outcomes in Pregnancy and the Postpartum

## 4:00-4:30 **Health Break & Exhibits**

Location: Foyer & Exhibit Hall

## 4:30-5:30 **KEYNOTE 6 : REM Sleep Behaviour Disorder: The Royal Path to Neuroprotective Treatment**

Dr. Ron Postuma, MD, MSc

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## Technologist Program: Sunday, September 27, 2015

### 10:30-11:15 **Workstation B - Scoring Bootcamp**

Location: Salon C/D

**Natalie Morin**

Workshop B will be an Advanced level scoring workshop to outline the latest scoring updates and rules from the AASM and Canadian legislative bodies. Staging, respiratory scoring, arousal identification and classification, as well as limb movements will be identified and discussed.

### 11:15-12:00 **Troubleshooting**

Location: Salon C/D

**Iain Simons**

In this session, we will examine artifact recognition and correction. We will learn to identify and correct artifacts, ranging from 60Hz noise, muscle/movement artifact, EKG artifact and slow frequency artifacts. Other miscellaneous artifacts will be examined, such as electrode popping, mixed frequency artifact and pulse artifact. We will also explore the techniques that will provide the best “insurance” against undesirable recordings.

### 12:45-2:00 **Guide d'exercice du Collège des médecins du Québec -l'apnée obstructive du sommeil et les autres troubles respiratoires du sommeil**

Location: Salon C/D

**Dre Kateri Champagne, MD, MSc, FRCPC, ABSM**

Audience visée :

inhalothérapeute, RPSGT, technicien en électrophysiologie médicale  
médecin formé ou non en médecine du sommeil, dentiste

Objectifs :

A la fin de la présentation, le participant qu'il soit pourra :

Expliquer à un confrère les buts visés lors du développement du guide d'exercice du Collège des médecins et son contexte historique ;

Prendre action afin de conformer sa pratique professionnelle liée au sommeil aux normes de pratique du guide du CMQ, que la pratique soit au laboratoire du sommeil, fournisseurs de soins-ventes d'appareil ou encore en clinique médicale du sommeil ;

Comparer et contraster les recommandations dans sa province d'origine avec les recommandations des autres juridictions nord-américaines.

### 2:00-2:45 **Workstation C - Expanded Montage**

Location: Salon C/D

**James Sayegh**

Workstation C will be identifying the need for expanded montage for Paediatric/Seizure/Movement Disorders in the sleep lab. How to identify the need for an expanded montage, and what channels to add to your standard PSM montage. How to recognize abnormal EEG on the expanded montage, and how it affects the analysis,



diagnosis and treatment of patients. Learning Objectives: By the end of the session, the audience will be able to understand the usefulness of the seizure montage, in addition to the key differences between it and limited sleep only montage. Listeners will understand what criteria the physicians use to order a seizure montage study, as well as how to adequately evaluate any features that might be seen. This will extend to both the overnight as well as the scoring component.

2:45-3:15

## **EKG Arrhythmia**

Location: Salon C/D

### **Cheryl Jessop**

Examples of NSR (Normal sinus rhythm) and some of the more common EKG arrhythmias seen in the sleep laboratory. How to identify these arrhythmias, how it affects collection, analysis and treatment of the patient. Examples of different arrhythmias will be presented and discussed with the group.

Learning Objectives:

- Discuss the components of the EKG waveform
- Learn how to analyze the EKG to recognize abnormalities
- Describe and discuss various EKG arrhythmias and their severity
- Review AASM cardiac scoring rules
- Review clinical examples from PSGs



The CSS thanks you for your attendance and participation in our biennial scientific conference.

## **UPCOMING MEETINGS:**

### **2016 CSS Annual General Meeting**

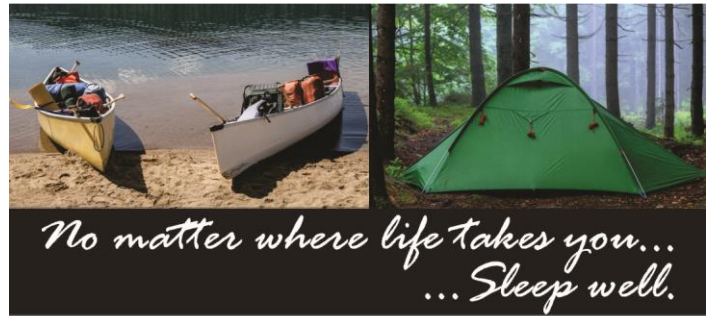
The next Annual General Meeting for CSS will take place in Denver, Colorado in conjunction with the APSS meeting, June 2016.

### **2017 CSS Conference**



We are excited to announce the 8th congress of the CSS will take place in beautiful Calgary, Alberta, at the Hyatt Regency Hotel from April 28-30, 2017. We look forward to seeing you there!

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