Saturday, April 29 2017

7:00 am - 7:00 pm
Registration Open

7:30 am - 8:00 am
Poster Installation

8:00 am - 8:30 am
Opening Ceremonies and Awards

8:30 am - 9:30 am

Keynote 1 - Neural and Chemical Systems Mediating Sleep-Wake States and their Homeostatic Regulation
Professor Barbara E. Jones PhD, FRSC, Professor Department of Neurology and Neurosurgery, McGill University, Montreal Neurological Institute

Different neural cell groups containing different neurotransmitters and projecting to different targets discharge in association with the three sleep-wake states and their polygraphic parameters. Determining the discharge profiles of such cell groups across the sleep-waking cycle reveals the way in which they can generate or modulate particular states or their principal features. Accordingly, noradrenergic locus coeruleus neurons were first found to discharge during waking in association with behavioral arousal and to cease firing during sleep, thus playing a role in promoting waking and behavioral arousal with postural muscle tone. Other neurotransmitter containing cell groups, notably the cholinergic neurons, have only recently been recorded using the juxtacellular technique, which permitted their identification, and thereby shown to discharge in association with EEG gamma and theta activity during active waking but also during paradoxical sleep with muscle atonia. These neuromodulators influence GABAergic and glutamatergic neurons which form the effector neurons through the brain and play different roles depending upon their specific receptors. The neuropeptides, orexin and MCH, also influence the effector systems in a reciprocal manner to promote arousal and sleep, respectively. These neuromodulatory and effector neurons are regulated in a homeostatic manner, which in turn underlies the homeostatic regulation of sleep-wake states.

Learning Objectives:
1. Review the major chemical neurotransmitter and neuromodulatory systems in the brain that regulate sleep-wake states.
2. Review the discharge profiles and interactions of these systems which generate the sleep-waking cycle.
3. Review the way in which these neural systems are homeostatically regulated such that sleep and waking are so regulated in turn.

Keynote 2 - Childhood Obstructive Sleep Apnea Syndrome: What We Know and What We Don’t Know in 2017
Carole L. Marcus M.B.B.Ch., Distinguished Endowed Chair in Pediatrics Professor of Pediatrics, University of Pennsylvania, Director, Sleep Center, Children’s Hospital of Philadelphia
The childhood obstructive sleep apnea syndrome (OSAS) is common, but much remains unknown about its pathophysiology, management, natural history and sequelae. This presentation will discuss evidence-based, state of the art knowledge on childhood OSAS, with emphasis on areas needing further research.

Learning Objectives

1. To review the epidemiology and pathophysiology of childhood OSAS
2. To evaluate management and sequelae of childhood OSAS
3. To discuss areas requiring future research.

Health Break & Exhibits Open

AMA TOP Insomnia Guidelines
Speaker: Charles Samuels M.D., CCFP, DABSM, Medical Director, Centre for Sleep & Human Performance
Discussion on insomnia in patients with OSA.
Learning Objective:

1. To diagnose and treat insomnia in this patient population

12:00 pm - 1:00 pm

**Optimizing Sleep and Travel in Canadian Olympic Sports**
Speaker: Amy Bender MSc, PhD, Sleep Scientist, Centre for Sleep & Human Performance; University of Calgary Faculty of Kinesiology
Optimal sleep is emerging as a key pillar for athletic success and is critical for elite athletes to perform at their peak both home and away. This session will give a brief overview on the science of sleep and circadian rhythms; how professional athletes are prioritizing sleep; and what optimal sleep is and strategies to get it for athletes at home and while travelling.

Participants will be able to:

1. Understand the basic science of sleep and circadian rhythms
2. Learn three sleep interventions used that improve mood and performance in athletes
3. Learn strategies for better circadian adjustment to transcontinental travel

1:00 pm - 2:00 pm

Lunch & Exhibits Open

1:00 pm - 2:00 pm

**Insomnia Interest Group**
Insomnia Interest Group meeting: A good place to connect with other clinicians and researchers who have an interest in insomnia and its treatment.

2:00 pm - 3:00 pm

**Pediatric Sleep**
Speaker: Manisha Witmans MD, University of Alberta
Discussion on pediatric patients in the sleep lab.

Learning Objectives:

1. To understand how to handle kids and to get the best data.
2. How to diagnose and treat pediatric sleep disorders.
La technologie peut-elle vous aider à bien dormir?
Speaker: Natalie Morin RPSGT, TEPM (polysomnographie)
Objectifs d'apprentissage:

1. Révision des nouveautés technologiques qui promouvoient un meilleur sommeil.
2. Révision des recherches de validation complétées avec ces gadgets.
3. Évaluer si ces technologies ont une place au laboratoire.

Filters and Technical Troubleshooting
Speaker: Alanna Cornish RPSGT, RST, BSc, Sleep Technologist, Sound Sleep Solutions

A discussion on the artifacts seen in routine PSG collection. We will review how to prevent artifacts in a recording and how to fix artifact when issues arise.

Learning Objectives:

1. Understanding when and how to fix and alter recordings using filters and troubleshooting techniques.
2. Procedures to collect artifact free studies.

Medical Issues in the Sleep Lab
Speaker: Adele Baker BSc(H), PGCE, RRT, Registered Respiratory Therapist, Sleep Disorders Clinic, Sick Kids Hospital, Toronto

Learning Objectives:

1. Prevention
2. Management
3. Cases

Health Break & Exhibits Open

Keynote 3 - Developing Precision Sleep/Circadian Medicine
Allan I. Pack M.B.Ch.B., Ph.D., FRCP, John Miclot Professor of Medicine. Director, Center for Sleep and Circadian Neurobiology, Chief, Division
One of the major goals of many areas of medicine is to develop a more personalized approach to diagnosis and treatment of disease. The fundamental concept is that individuals differ in terms of genetic/epigenetic influences that drive different presentations of disease, and different consequences. In the United States, major precision medicine initiatives have been started to address this concept. It seems that sleep/circadian disorders are ideally suited to this new approach. This will be illustrated by new approaches to one key sleep disorder—obstructive sleep apnea.

**Objectives**

1. To explain the concepts of personalized/precision medicine and P4 medicine.
2. To illustrate the approaches being used to advance this in the United States.
3. To illustrate how to apply these concepts using obstructive sleep apnea as an example.

5:30 pm - 7:00 pm

**Poster Reception**

Poster Presentations, Wine & Cheese and Exhibits Open

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7:30 pm - 10:30 pm

**Round 'em Up Gala Reception at the Calgary Petroleum Club - Optional social Event**

Join us for a special social event

*Round 'em Up Gala*

at the [Calgary Petroleum Club](#)

The Petroleum Club is Calgary's premier business club located in the heart of downtown Calgary and just a short walk from the Hyatt Regency Hotel. Rooted in history since 1948, this private club will open its door for conference attendees on Saturday night.
Amazing food and entertainment is being planned for your enjoyment. Check this space in the new year for further details!

**Tickets** cost $60 for conference attendees and their guests. $30 for students.

**Tickets will be on sale at the time of registration.**