

World Association of Sleep Medicine & Canadian Sleep Society Congress

SLEEP, HEALTH & SOCIETY



Canadian Sleep
Society



Société Canadienne
du Sommeil



QUEBEC CITY, CANADA • SEPTEMBER 10-14, 2011

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Restless Legs Syndrome around the clock

Monday, September 12, 2011, 12:00 – 13:30

QUÉBEC CITY CONVENTION CENTRE

Room: lecture hall

Chair: **Richard Allen**



12:00 – 12:20	From preclinics to the RLS patient's needs : is there a rationale for a 24 hours treatment? <i>Richard Allen</i>
12:20 – 12:40	Efficacy and safety of rotigotine transdermal patch: a 5-year prospective, multinational, open-label study. <i>Luigi Ferini-Strambi</i>
12:40 – 13:00	Daytime burden in RLS patients: a new paradigm from diagnosis to treatment ? <i>Diego Garcia-Borreguero</i>
13:00 – 13:20	Relationship between clinically significant augmentation of RLS and dosage of transdermal rotigotine. <i>David Rye</i>
13:20 – 13:30	Q&A. <i>All</i>

FACULTY DETAILS

- **Richard Allen**, PhD, FAASM, Associate Professor, Department of Neurology, Johns Hopkins School of Medicine, Baltimore, Maryland, USA
- **Luigi Ferini-Strambi**, MD, Associate Professor, Director, Sleep Disorders Center, Università Vita-Salute San Raffaele, Milan, Italy
- **Diego Garcia-Borreguero**, MD, PhD, Director, Sleep Research Institute, Madrid, Spain
- **David Rye**, MD, PhD, Department of Neurology, Emory University School of Medicine, Atlanta, Georgia, USA

Enclosed information solely reflects EU labeling and approved indication.
Rotigotine Transdermal system is not authorized for sale in Canada.





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World Association of Sleep Medicine & Canadian Sleep Society Congress

SLEEP, HEALTH & SOCIETY



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QUEBEC CITY, CANADA • SEPTEMBER 10-15, 2011

WWW.WASM2011.ORG

WELCOME

Dear Colleagues and Friends,

On behalf of the World Association of Sleep Medicine (WASM) and the Canadian Sleep Society (CSS), we are delighted to welcome you to our joint congress of the 4th International World Sleep Congress and 5th Conference of the CSS in Quebec City, Canada from September 10-14, 2011.

The congress is an international forum of professionals advancing current thinking to improve sleep health, and encourage prevention and treatment of sleep disorders. The congress brings together leading experts to discuss, debate, and disseminate knowledge amongst sleep clinicians and researchers for the advancement of sleep health worldwide.

Your involvement in this congress is greatly valued. We hope that you'll enjoy the science, collegiality and social events at our world sleep conference in this charming city.

Welcome to Quebec City!

Best regards,



Christian Guilleminault, MD
President, **WASM**



Helen S. Driver, PhD, DABSM
President, **CSS**

CONGRESS PURPOSE

Dear Colleagues and Friends:

On behalf of the World Association of Sleep Medicine (WASM) and Canadian Sleep Society (CSS), we are delighted to welcome you to this international sleep meeting in Quebec City, Canada. The scientific committee has put together an outstanding program with courses and workshops, keynote lectures, symposia, and nearly 500 oral and poster presentations covering all areas of sleep medicine from basic sciences to technological advances and clinical applications.

With its theme on **Sleep, Health, and Society**, this international event brings together more than 1000 participants from 44 countries. Leading experts from around the world will present the latest developments in the field about sleep and its disorders with content that should be of interest to clinicians, researchers, technologists, students and trainees, and even the lay public.

We trust this educational forum provides an ideal opportunity to meet colleagues and share new ideas on the most recent advances in the field to promote healthy sleep worldwide and improve the prevention, diagnosis, and treatment of sleep disorders.

We wish to thank you for attending this meeting and are grateful to all of those who have contributed to its content and organization. We hope that you have a pleasant learning experience and that you enjoy Quebec City and its rich culture. We look forward to greeting you personally during the meeting.

Best regards,



Charles M. Morin, PhD
WASM/CSS 2011
Program Co-Chair



Richard Allen, PhD
WASM/CSS 2011
Program Co-Chair

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COMMITTEES

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Charles M. Morin, PhD

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Shelly Weiss, MD

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Célyne Bastien, PhD

Christian Burgess, BSc

Vincent Moreau, PhD

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Sharon Keenan, PhD, RPSGT

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Sudhansu Chokroverty	USA	Eleftherios Papathanasiou	Greece
Antonio Culebras	USA	Liborio Parrino	Italy
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Raffaele Feri	Italy	Joan Santamaria	Spain
Luigi Ferini-Strambi	Italy	Julia Santin	Chile
Diego Garcia-Borreguero	Spain	Toshiaki Shiomi	Japan
David Gozal	USA	Garima Shukla	India
Leja Dolenc Groselj	Slovenia	Karel Sonka	Czech Rep
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Seung Bong Hong	Korea	Yuping Wang	China
Seung Chul Hong	Korea	Catesby Ware	USA
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Mary Ip	Hong Kong	Phyllis Zee	USA
Sharon Keenan	USA	Marco Zucconi	Italy

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Member-at-Large (Student)	Christian Burgess, BSc
Member-at-Large (Student)	Vincent Moreau, PhD
Member-at-Large (Technologist)	Jeremy Gibbons, RPSGT
Member-at-Large (Technologist)	Natalie Morin, RPSGT
Member-at-Large (Membership)	Glendon Sullivan, MD, FRCP(C), FCCP
Member-at-Large (Physician Specialty)	Judith Leech, MD, FRCP(C)
Member-at-Large (Website/Vigilance)	Stuart Fogel, PhD

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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, MSc, PhD, FRCD	2005-2008



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World Association of Sleep Medicine

The fundamental mission of the WASM is to advance sleep health worldwide. WASM will fulfill this mission by promoting and encouraging education, research and patient care throughout the World, particularly in those parts of the world where the practice of sleep medicine is less developed. WASM will act as a bridge between different sleep societies and cultures, supporting and encouraging worldwide exchange of clinical information and scientific studies related to sleep medicine. WASM will seek to encourage development and exchange of information for world-wide and regional standards of practice for sleep medicine.

World Sleep Day

World Sleep Day (WSD) is an annual event, intended to be a celebration of sleep and a call to action on important issues related to sleep, including medicine, education, social aspects and driving. It is organized by the WSD Committee of the World Association of Sleep Medicine (WASM) and aims to lessen the burden of sleep problems on society through better prevention and management of sleep disorders. WSD 2012 is being held on March 16, 2012. The committee is co-chaired by WASM members Antonio Culebras, MD, professor of neurology at SUNY, Upstate Medical University, New York and Liborio Parrino, MD, assistant professor of neurology at Parma University, Italy. Please stop by the WASM informational booth for more information on how you can be involved.



The Canadian Sleep Society (CSS) / Société Canadienne du Sommeil (SCS)

The CSS is a professional association of clinicians, scientists and technologists formed in June 1986 to further the advancement and understanding of sleep and its disorders through scientific study and public awareness. The Society has established the following objectives:

- To facilitate the advancement of education in the area of sleep research and sleep disorders medicine.
- To help consolidate and advance sleep research in Canada.
- To promote and support the growth and quality of sleep disorders medicine in Canada.
- To increase the profile and support for sleep research in Canada.
- To increase public awareness of the importance of sleep research and sleep disorders medicine, and Canada's contribution to this area.
- To engage in educational activities and facilitate support for trainees.

KEYNOTE SPEAKERS



Charles Czeisler, MD, PhD (USA)

Sleep, health and circadian rhythm disruptions in modern society



Collin Sullivan, MD, PhD (Australia)

Sleep-disordered breathing in pregnancy: Effects on the fetus



Pierre Philip, MD, PhD (France)

Sleep, sleepiness, and safety on the road



Barbara E Jones, PhD (Canada)

Neural regulation of homeostatic sleep mechanisms



Kevin Morgan, PhD (United Kingdom)

Insomnia, therapy and health policies



Matthew Walker, PhD (USA)

Sleep, learning, and emotion



Wayne Hening Memorial Lecture

Sudhansu Chokroverty, MD (USA)

Motor Control and Dyscontrol in Sleep

PROGRAM-AT-A-GLANCE

Friday, September 9

18:00-21:00 On-Site Registration

Saturday, September 10

7:00-20:00 On-Site Registration

8:00-12:00 Pre-Congress Course 1
Pre-Congress Course 2-313:00-17:00 Pre-Congress Course 1 (con'd)
Pre-Congress Courses 4-5

14:00-17:00 Public Lectures (French)

Sunday, September 11

7:00-18:00 On-Site Registration

8:00-12:00 Pre-Congress Courses 6-7

8:30-17:00 Technologist Program

10:15-17:00 Student Training Program

17:30-20:30 Opening Ceremony / Reception

Monday, September 12

7:00-18:00 On-Site Registration

8:00-9:00 Keynote Lecture 1
(Charles Czeisler)

9:00-10:30 Symposia 1-4

10:00-17:00 Exhibition

10:30-11:00 Coffee Break

11:00-12:30 Technologist Workshop
(French)

11:00-12:30 Oral Paper Presentations

12:30-14:00 Industry Symposium (UCB)

14:00-15:00 Keynote Lecture 2
Matthew Walker)

15:00-15:30 Coffee Break

15:00-17:00 Poster Presentations

15:30-17:00 Symposia 5-7

15:30-17:30 Technologist Workshop

17:00-18:30 Symposia 8-10

19:00-22:00 Banquet Dinner (Ticketed)
Chateau Frontenac19:00-22:00 Dinner Cruise,
St. Lawrence River**Tuesday, September 13**

7:00-18:00 On-Site Registration

8:00-9:00 Keynote Lecture 3
(Collin Sullivan)

9:00-10:30 Symposia 11-14

10:00-17:00 Exhibition

10:30-11:00 Coffee Break

11:00-12:30 Technologist Workshop
(French)

11:00-12:30 Oral Paper Presentations

12:30-14:00 Industry Symposium
(Respironics)14:00-15:00 Keynote Lecture 4
(Pierre Philip)

15:00-15:30 Coffee Break

15:00-17:00 Poster Presentations

15:30-17:00 Symposia 15-17

15:30-17:30 Technologist Workshop

17:00-18:30 Symposia 18-20

18:30-20:00 WASM Membership Meetin

18:30-20:00 CSS Annual General Meetin

20:00-23:00 Snooze Bowl

Wednesday, September 14

7:00-18:00 On-Site Registration

8:00-9:00 Keynote Lecture 5
(Kevin Morgan)

9:00-10:30 Symposia 21-23

10:00-17:00 Exhibition

10:30-11:00 Coffee Break

11:00-12:30 Technologist Workshop
(French)

11:00-12:30 Oral Paper Presentations

12:30-14:00 WASM/ESRS Symposium

12:45-13:45 Hening Memorial Lecture
(Sudhansu Chokroverty)14:00-15:00 Keynote Lecture 6
(Barbara Jones)

15:00-15:30 Coffee Break

15:00-17:00 Poster Presentations

15:30-17:00 Symposia 24-26

15:30-17:30 Technologist Workshop

17:30-18:00 Closing Ceremony

18:00-19:00 Farewell Social Event

EXHIBITION OPEN 10:00-17:00

SATURDAY, SEPTEMBER 10, 2011**7:00am – 8:00pm On-Site Registration****8:00am – 5:00pm Pre-Congress Course 1****CI: Advances in the Management of Pediatric Sleep Disorders (206A)****Co-Chairs:** Shelly Weiss, MD (Canada) and Sanjeev Kothare, MD (USA)**Speakers:** Indra Narang, MD (Canada); Umakanth Khatwa, MD (USA); Oliviero Bruni, MD (Italy); Roger Godbout, PhD (Canada); Shelly Weiss, MD (Canada); Sanjeev Kothare, MD (USA); Suresh Kotagal, MD (USA); Sona Nevsimalova, MD (Czech Republic)**Objectives:**

1. Review common sleep disorders that occur in childhood and adolescence, and understand their management strategies.
2. Understand the differences in the interpretation of pediatric vs. adult polysomnography.
3. Understand the role of pharmacotherapy in the treatment of pediatric insomnia.
4. Review and update knowledge on pediatric sleep disorders in diverse medical conditions (mental health disorders, epilepsy, headaches, traumatic brain injury).

Sleep apnea and its consequences

Indra Narang, MD (Canada)

Polysomnography in pediatrics

Umakanth Khatwa, MD (USA);

Presentation slides courtesy of Judy Owens, MD (USA)

Non-pharmacological and pharmacological treatment of insomnia in normal infants and children

Oliviero Bruni, MD (Italy)

Treatment of insomnia in children and adolescents with mental health disorders

Roger Godbout, PhD (Canada)

Motor disorders of sleep including PLMS, RLS, and bruxism

Shelly Weiss, MD (Canada)

Epilepsy and sleep

Sanjeev Kothare, MD (USA)

Traumatic brain injury, headache and sleep

Suresh Kotagal, MD (USA)

Narcolepsy and hypersomnolence

Sona Nevsimalova, MD (Czech Republic)

SATURDAY, SEPTEMBER 10, 2011**8:00am – 12:00pm Pre-Congress Course 2****C2: Understanding Insomnia - New Approaches to Etiology, Diagnosis and Treatment (206B)****Chair:** Dieter Riemann, PhD (Germany)**Speakers:** Jack Edinger, PhD (USA); Simon Kyle, PhD (United Kingdom);
Dieter Riemann, PhD (Germany); Daniel Buysse, MD (USA); Phil Gehrman PhD (USA)**Objectives:**

1. Understand the concept of hyperarousal as relevant to insomnia pathogenesis.
2. Review current thinking about cognitive models of insomnia.
3. Discuss the differential diagnosis of insomnia syndromes from a pathobiological perspective.
4. Receive a concise overview of cognitive-behavioral therapy for insomnia.

Diagnosis of insomnia / differential-diagnostic process

Jack Edinger, PhD (USA)

Cognitive models of insomnia

Simon Kyle, PhD (United Kingdom)

The hyperarousal concept of insomnia – neurobiological aspects

Dieter Riemann, PhD (Germany)

Pharmacotherapy of insomnia

Daniel Buysse, MD (USA)

Cognitive-behavioral treatment of insomnia: nuts and bolts

Phil Gehrman, PhD (USA)

SATURDAY, SEPTEMBER 10, 2011**8:00am – 12:00pm Pre-Congress Course 3****C3: Advanced Management of Sleep Breathing Disorders: An Interactive Problem-Based Session (204AB)****Co-Chairs:** Clodagh Ryan, MD (Canada) and Robert Thomas, MD (USA)**Speakers:** Clodagh Ryan, MD (Canada); Robert Thomas, MD (USA); Robert Skomro, MD (Canada); Jean-Louis Pépin, MD, PhD (France); Antonio Culebras, MD (USA)**Objectives:**

1. Understand the nature of interactions of sleep apnea and cardiac disease.
2. Learn alternative (to positive pressure) approaches to management of chemoreflex pathology in the context of sleep apnea.
3. Receive an update on patterns and management of sleep apnea in selected neurological and neuromuscular disorders.
4. Learn applied ventilation principles for the management of the obesity-hypoventilation syndrome.

Sleep apnea and cardiac disease

Clodagh Ryan, MD (Canada)

Alternative treatments for chemoreflex-mediated sleep apnea

Robert Thomas, MD (USA)

Sleep-related breathing disorders and neuromuscular disease

Robert Skomro, MD (Canada)

Management of positive airway pressure (PAP) therapies in obesity hypoventilation syndrome

Jean-Louis Pépin, MD, PhD (France)

Sleep and stroke

Antonio Culebras, MD (USA)

SATURDAY, SEPTEMBER 10, 2011**1:00pm – 5:00pm Pre-Congress Course 4****C4: Ambulatory Sleep Techniques (204AB)****Chairs:** Thomas Penzel, PhD (Germany)**Speakers:** Heidi Danker-Hopfe, PhD (Germany); Dirk Sommermeyer, MD (Sweden); Robert Thomas, MD (USA); Thomas Penzel, PhD (Germany)**Objectives:**

1. Understand usefulness and limitations of ambulatory ECG.
2. Learn about the use of peripheral pulse wave analysis in sleep apnea medicine.
3. Understand how autonomic and respiratory “windows” provide unique insights into sleep physiology and pathology.
4. Receive an update on ambulatory monitoring for sleep apnea diagnosis.

Ambulatory EEG recording for sleep and insomnia monitoring

Heidi Danker-Hopfe, PhD (Germany)

Pulse wave analysis to diagnose sleep apnea

Dirk Sommermeyer, MD (Sweden)

Cardiopulmonary coupling and heart rate analysis

Robert Thomas, MD (USA)

Meta-analysis and guideline for portable monitoring in sleep apnea

Thomas Penzel, PhD (Germany)

SATURDAY, SEPTEMBER 10, 2011**1:00pm – 5:00pm Pre-Congress Course 5****C5: Parasomnias Update 2011 (206B)****Chair:** Jacques Montplaisir, MD, PhD (Canada)**Speakers:** Isabelle Arnulf, MD, PhD (France); Ron Postuma, MD (Canada); Anne Germain, PhD (USA); Rosalia Silvestri, MD (Italy); Carlos Schenck, MD (USA)**Objectives:**

1. Review the clinical and sleep laboratory characteristics (PSG and video) of REM and non-REM parasomnia.
2. Discuss the differential diagnosis of parasomnia.
3. Update knowledge on the basic mechanisms of REM and non-REM parasomnia.
4. Review psychological and pharmacological treatments of parasomnia.

Sleepwalking

Isabelle Arnulf, MD (France)

REM behavior disorder

Ron Postuma, MD, PhD (Canada)

Nightmares

Anne Germain, PhD (USA)

Sleep-related epilepsy

Rosalia Silvestri, MD (Italy)

Treatment of REM and nonREM parasomnias

Carlos Schenck, MD (USA)

9:00am – 6:00pm International Restless Legs Study Group (201B)

3:00pm – 7:00pm Canadian Sleep Medicine Credentialing Committee (201A)

2:00pm – 5:00pm Public Lectures (French)

Co-Chairs: Julie Carrier, PhD and Célyne Bastien, PhD
(in collaboration with La Fondation Sommeil)

2:00pm -3:00pm

Restless Legs Syndrome (Le Voleur de Sommeil / le Syndrome des Jambes Sans Repos) (202)

Régis Langelier, PhD

3:00pm -4:00pm

Sleep and Pain (J'ai mal! Effets sur le sommeil et l'humeur) (202)

Gilles Lavigne, DMD, PhD

Sleep Apnea (L'apnée du sommeil n'a pas de sexe) (207)

Frederic Séries, MD

4:00pm -5:00pm

Sleep and Menopause (Bien dormir à la ménopause, est-ce possible?) (202)

Josée Savard, PhD

Shift Work (Le travail de nuit: problèmes et stratégies d'adaptation) (207)

Marie Dumont, PhD

SUNDAY, SEPTEMBER 11, 2011**7:00am – 6:00pm On-Site Registration****8:00am – 12:00pm Pre-Congress Course 6****C6: The Measurement of Periodic Leg Movements During Sleep (PLMS) and Wakefulness (PLMW) (203)****Co-Chairs:** Raffaele Ferri, MD (Italy) and Marco Zucconi, MD (Italy)**Speakers:** Lynn-Marie Trotti, MD (USA); Raffaele Ferri, MD (Italy); Marco Zucconi, MD (Italy); Arthur Walters, MD (USA); Richard Allen, PhD (USA)**Objectives:**

1. Review and understand the neurophysiology of motor control and limb activation during sleep.
2. Receive an update on measurement principles and methods.
3. Understand the impact of PLMs on the autonomic nervous system.
4. Integrate the new biology of PLMS/PLMW into clinical practice.

The neurophysiology of periodic leg movements during sleep

Lynn-Marie Trotti, MD (USA)

The measurement of periodicity and time structure of leg motor activity during sleep

Raffaele Ferri, MD (Italy)

The analysis of periodic leg movements during wakefulness and the suggested immobilization system

Marco Zucconi, MD (Italy)

The analysis of impact of periodic leg movements on the autonomic nervous system

Arthur Walters, MD (USA)

The measurement of periodic leg movements during sleep by actigraphy

Richard Allen, PhD (USA)

SUNDAY, SEPTEMBER 11, 2011

8:00am – 12:00pm **Pre-Congress Course 7**

C7: Circadian Rhythms - Beyond Sleep (202)

Chair: Phyllis Zee, MD, PhD (USA)

Speakers: Diane Boivin, MD, PhD (Canada); Steven Shea, PhD (USA);
Fred Turek, PhD (USA); Phyllis Zee, MD, PhD (USA)

Objectives:

1. Receive an update on circadian biology beyond sleep processes, including metabolic regulation.
2. Understand the link between circadian rhythms and mood disorders.
3. Understand the role of circadian dysregulation in cardiovascular pathology.
4. Obtain an applied bench-to-bedside perspective of circadian biology.

Circadian rhythms and psychiatric disorders

Diane Boivin, MD, PhD (Canada)

Circadian regulation of cardiovascular function: Implications for cardiovascular disorders

Steven Shea, PhD (USA)

Circadian rhythms and risk for metabolic disorders

Fred Turek, PhD (USA)

Circadian rhythms disorders: From clocks to disease

Phyllis Zee, MD, PhD (USA)

SUNDAY, SEPTEMBER 11, 2011

8:30am – 5:00pm

Technologists Program (206AB)

8:30am – 8:45am

Welcome

Co-chairs: Natalie Morin, RPSGT (Canada) and Sharon Keenan, PhD, RPSGT (USA)

8:45am – 9:30am

Advances in Digital Technology and Sleep

Thomas Penzel, PhD (Germany)

9:30am – 10:15am

Update on Sleep and Control of Ventilation 2011

Richard Horner, PhD (Canada)

10:15am – 10:45am

BREAK

10:45am – 11:30am

CVD and Hypertension - Links with Sleep

Anstella Robinson, MD (USA)

11:30am – 12:15pm

PAP Therapy for Symptomatic and Asymptomatic OSA

Najib Ayas, MD (Canada)

12:15pm – 1:15pm

LUNCH

1:15pm – 2:00pm

Discussion Group: BRPT updates

Co-chairs: Natalie Morin, RPSGT (Canada) and Roger Godbout, PhD, RPSGT (Canada)

Speakers: Bonnie Robertson, RPSGT (USA); Janice East, RPSGT, REEGT (USA)

2:00pm – 2:45pm

Panel Discussion: International Credentialing

Co-chairs: Helen Driver, PhD, RPSGT (Canada) and Sharon Keenan, PhD, RPSGT (USA)

Speakers: Régine Cecchi, RPSGT (France); Mark Norman, RPSGT (Australia);

Thomas Penzel, PhD (Germany); Natalie Morin, RPSGT (Canada)

2:45pm – 3:15pm

BREAK

3:15pm – 4:00pm

Pediatric Sleep Disorders

Rafael Pelayo, MD (USA)

4:00pm – 5:00pm

PSG - Data Blitz

Sharon Keenan, PhD (USA) and Max Hirskowitz, PhD (USA)

SUNDAY, SEPTEMBER 11, 2011

10:15am – 5:00pm **Students Training Day Program (204AB)**

10:15am – 10:30am

Welcome

Co-chairs: Vincent Moreau, PhD (Canada) and Christian Burgess, BSc (Canada)
in collaboration with Célyne Bastien, PhD (Canada)

10:30am – 11:15am

Basic Science Talk: Neurobiology of Sleep

Barbara Jones, PhD, (Canada), CSS/WASM Invited Speaker

11:15am – 11:30am

Canadian Student 1: Error detection is reduced and emotional evaluation of errors is heightened following a night of total sleep deprivation

Ryan Renn, (Canada), CSS Award Winner

11:30am – 11:45am

Canadian Student 2: Spindles and slow waves are associated to verbal learning in older subjects

Marjolaine Lafortune, (Canada), CSS Award Winner

11:45am – 12:00pm

International Student 1: The effect of intranasal hypocretin-1 on glucose tolerance in normal weighted and obese narcolepsy patients

Sara Lena Weinhold, (Germany), CSS Student Travel Award Winner

12:00pm – 12:15pm

International Student 2: Altered cytokines in marathon runners with restless leg syndrome

Sayonara Beatriz Ranciaro- Fagundes, (Brazil), CSS Student Travel Award Winner

12:15pm – 1:15pm

LUNCH BREAK

SUNDAY, SEPTEMBER 11, 2011

10:15am – 5:00pm **Students Training Day Program (206A) (cont'd)**

1:15pm – 2:00pm

Do Circadian Rhythms Put You to Sleep? A Short (personal) History

Ben Rusak, PhD, (Canada), CSS Distinguished Scientist Recipient

2:00pm – 2:15pm

Canadian Student 3: Relationship between circadian rhythms of body temperature, melatonin secretion, and sleep propensity during the follicular and luteal phase of the menstrual cycle

Ari Shechter, (Canada), CSS Outstanding Student Award

2:15pm – 2:30pm

Canadian Student 4: Insomnia and daytime cognitive performance: a meta-analysis

Émilie Fortier-Brochu (Canada), CSS Outstanding Student Award

2:30pm – 2:45pm

Canadian Student 5: Manipulating sleep duration alters cognitive and emotional functioning in children

Jennifer Vriend, (Canada), CSS Student Travel Award Winner

2:45pm – 3:00pm

International Student 3: The relationship between sleep and memory in PTSD

Malgorzata Lipinska, (South Africa), CSS Student Travel Award Winner

3:00pm – 3:30pm

COFFEE BREAK

3:30pm – 4:15pm

Clinical Science Talk: Applications of CBT to Primary and Comorbid Forms of Insomnia

Jack Edinger, PhD (USA)

4:15pm – 5:00pm

Career Development Talk: Post-Doc Fellowship - Making it the Best Days of your Life

Anne Germain, PhD (USA)

5:30pm – 7:00pm **Opening Ceremony (206AB)**

7:00pm – 8:30pm **Welcome Reception (Foyer 4)**

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SUNDAY, SEPTEMBER 11, 2011

MONDAY, SEPTEMBER 12, 2011**7:00am – 6:00pm On-Site Registration****8:00am – 9:00am Keynote Lecture (2000AB)****Sleep, Health and Circadian Rhythm Disruptions in Modern Society**

Charles Czeisler, MD, PhD

Harvard Medical School and Brigham and Women's Hospital, Boston (USA)

9:00am – 10:30am Parallel Symposia 1-4**S1: Familial Aggregation of Insomnia – From Phenotypes to Genotypes – How Far Are We? (206A)****Chair:** Yun-Kwok Wing, MD (China) and Charles M. Morin, PhD (Canada)**Speakers:** Yun-Kwok Wing, MD (China); Charles M. Morin, PhD (Canada); Dieter Riemann, PhD (Germany); Mehdi Tafti, PhD (Switzerland);**Objectives:**

1. To review current state of evidence on the familial aggregation of insomnia.
2. To discuss potential mechanisms underlying the familial aggregation of insomnia.
3. To outline directions for future molecular genetic studies of insomnia.

Summary:

Family study can provide information for the association and interaction of both genetic and environmental factors of a disease, and hence, plays a critical pivotal role in genetic epidemiology. Thus, the identification of familial aggregation of insomnia may help to identify the underpinning mechanism that contributes to the familial risk of insomnia including genetic predisposition, shared environment factors, co-occurrence of other psychiatric comorbidities and learned behaviors. In this symposium, the emerging data on the familial aggregation of insomnia across the globe will be reviewed. The issues of clinical phenotypes and possible endophenotypes (such as hyperarousal mechanism) of insomnia will be critically re-appraised. The issue on gene-environment interactions of insomnia and possible ways to go ahead for future molecular genetic typing of insomnia will be discussed.

*9:00am – 9:20am***Familial aggregation of insomnia – an update**

Yun-Kwok Wing, MD (China)

*9:20am – 9:40am***The role of a family history as a risk factor for insomnia - A Longitudinal study**

Charles M. Morin, PhD (Canada)

*9:40am – 10:00am***Insomnia – from clinical phenotypes to hyperarousal – is hyperarousal an endophenotype?**

Dieter Riemann, PhD (Germany)

*10:00am – 10:20am***Insomnia – from environment to genes – how should we go ahead?**

Mehdi Tafti, PhD (Switzerland)

MONDAY, SEPTEMBER 12, 2011

9:00am – 10:30am **S2: Cardiology and Sleep (204AB)**

Chair: Douglas Bradley, MD (Canada)

Speakers: Douglas Bradley, MD (Canada); Jon-Erik Holty, MD (USA);
Kannan Ramar, MD (USA); Geraldo Lorenzi, MD, PhD (Brazil)

Objectives:

1. Present the mechanisms and occurrence of cardiac arrhythmia during REM sleep.
2. Document the impact of sleep and its disorders on occurrence of atrial fibrillation.
3. Present the way fluid shift during sleep impacts on heart failure, hypertension and venous insufficiency.
4. Explain how atherosclerosis may be secondary to sleep disorders even beginning very early in life.

Summary:

Sleep interacts with many cardiac functions and may be associated with specific cardiology syndromes or complications: REM sleep can be associated with specific arrhythmias undetected during wakefulness. Atrial fibrillation is affected by sleep and several sleep disorders. Atherosclerosis and its early development can be secondary to specific sleep disorders and the changes may begin very early in life. Finally nocturnal shift of rostral fluid play a role in the pathogenesis of sleep apnea in heart failure hypertension and venous insufficiency. Recognizing the mechanisms involved in each of these interactions of sleep and cardiac function is becoming an increasing important aspect of sleep medicine. Overall more attention should be paid to sleep and its disorders when considering cardio-vascular syndromes and conversely the sleep medicine clinicians need to know more about the interaction of sleep and cardiac function to provide appropriate care for their patients.

9:00am – 9:20am

Influence of fluid shifts during sleep on sleep apnea in heart failure, hypertension and venous insufficiency

Douglas Bradley, MD (Canada)

9:20am – 9:40am

REM sleep can be associated with specific arrhythmias undetected during wakefulness

Jon-Erik Holty, MD (USA)

9:40am – 10:00am

Atrial fibrillation is affected by sleep and several sleep disorders

Kannan Ramar, MD (USA)

10:00am – 10:20am

Atherosclerosis may be secondary to sleep disorders even beginning very early in life

Geraldo Lorenzi, MD, PhD (Brazil)

MONDAY, SEPTEMBER 12, 2011

9:00am – 10:30am **S3: Recent Advances in Pharmacological Therapeutics of Sleep Disorders (206B)**

Sponsored in part by an Unrestricted Educational Grant from Merck & Co. Inc

Chair: Jed Black, MD (USA)

Speakers: Dale Edgar, PhD (United Kingdom); Maria-Antonia Quera-Salva, MD (France); Jed Black, MD (USA)

Objectives:

1. Understand the role brain histaminergic neurons play in arousal state control, and how antihistaminergic compounds influence sleep-wakefulness.
2. Learn about combined chronobiotic - antidepressant agents and their action on insomnia and depression.
3. Describe the hypocretin-based hypothesis of cortical hyperarousal in insomnia and the rationale for hypocretin/orexin antagonists as potential sleep aids.

Summary:

Historically, two general pharmacological approaches have been utilized to treat insomnia: enhancement of central nervous system (CNS) GABA-ergic mechanisms, and blockade of monoaminergic activating systems. Over the past few decades, the majority of the pharmaceutical activity has focused on GABA mechanisms. Recently, attention has shifted to CNS monoaminergic and circadian rhythm regulating mechanisms. While antagonists of histaminergic activity, either through traditional antihistamines or tricyclic antidepressants, have been commonly used to treat insomnia, recent advances in CNS histaminergic science has led to renewed interest in the histaminergic system, alone or in concert with other CNS monoaminergic activating systems, as targets for modulation to promote and maintain sleep. Edgar will review current activity related to histaminergic modulation for insomnia treatment within the scientific and pharmaceutical industry. Until recently, most available antidepressants acted via monoaminergic mechanisms. Novel melatonergic compounds demonstrate antidepressant properties. Of these, the most advanced is agomelatine, which combines MT1 and MT2 agonism with 5-HT (2C) receptor antagonism. Agomelatine rapidly improves sleep quality, alertness at awakening and depression. Quera-Salva will review recent work in the evaluation of agents with chronobiotic antidepressant properties for the treatment of insomnia and depression. CNS Hypocretin ligand deficiency has been found in the vast majority of patients with narcolepsy-cataplexy syndrome. The hypocretin system has been shown to play a key role in the regulation of CNS monoaminergic activity. These discoveries have fueled much interest within the pharmaceutical industry to develop agents to block hypocretin receptors as a means of promoting and maintaining sleep. The pharmaceutical industry has preferred the term "orexin" (the alternate name for this system), rather than hypocretin, and a number of orexin antagonists are in development across the industry. Black will review this development activity.

9:00am – 9:25am

Histaminergic modulation of wakefulness and sleep: Translating preclinical discovery to clinical applications

Dale Edgar, PhD (United Kingdom)

9:25am – 9:50am

Chronobiotic antidepressants: Sleep and depression

Maria-Antonia Quera-Salva, MD (France)

9:50am – 10:15am

Hypocretin/Orexin antagonists in Insomnia

Jed Black, MD (USA)

MONDAY, SEPTEMBER 12, 2011

9:00am – 10:30am **S4: Sleep, Recovery, Regeneration and Performance in Sport: Current Sleep Research and Health Initiatives on Sleep and Exercise (202)**

Chair: Charles H. Samuels, MD (Canada)

Speakers: Charles H. Samuels, MD (Canada); Shawn D. Youngstedt, PhD (USA); Cheri D. Mah, MS (USA); Christopher E. Kline, PhD (USA)

Objectives:

1. Describe and explain the current state of knowledge regarding the complex interrelationship between sleep and exercise.
2. Review research methods to investigate the relationship of sleep to exercise in the general population and in athlete populations.
3. Evaluate and predict the impact of sleep restriction, poor sleep quality and circadian dysrhythmia on athletic performance and human health in a clinical population.

Summary:

The bi-directional relationship of sleep to exercise and exercise to sleep has been a subject of debate in the sleep literature for many years. However the sport science community has a long and rich history of exploring the relationship of sleep and circadian dysrhythmia to training and performance in sport. Sport medicine physicians, coaches and trainers have long believed that sleep is the foundation of recovery and regeneration but have had little basic science and epidemiological evidence to support this belief. In the last 10 years sleep researchers have begun to look specifically at the relationship of sleep to training, recovery and performance in high performance athletes who compete at the Varsity, National Team and Olympic level as well as professional athletes in various power and endurance sports. The purpose of this symposium is to bring a group of internationally recognized and published academics from both the Sleep Science/Medicine and Sport Science/Medicine communities to present, discuss and promote interest in this fascinating area of investigation that has substantial implications for the future of athletic training regimens but also for the future of addressing the health implications of a sedentary society.

9:00am – 9:20am

Sleep and the lifecycle of an athlete

Charles H. Samuels, MD (Canada)

9:20am – 9:40am

Does sleep influence athletic performance? A critique of the evidence

Shawn D. Youngstedt, PhD (USA)

9:40am – 10:00am

Sleep extension and athletic performance in collegiate sports

Cheri D. Mah, MS (USA)

10:00am – 10:20am

Circadian rhythms and athletic performance

Christopher E. Kline, PhD (USA)

MONDAY, SEPTEMBER 12, 2011**10:00am – 5:00pm** **Exhibition (200ABC)****10:30am – 11:00am** **Coffee Break (200ABC)****11:00am – 12:30pm** **Technologists Workshops (French) (207)****Complex Sleep Apnea and ASV Titrations****(Apnée du sommeil complexe et titration avec la servo-ventilation adaptée)**

Pierre Mayer, MD (Canada)

11:00am – 12:30pm **Oral Paper Presentations (Sessions 1-4)****O1: Insomnia: Epidemiology and Mechanisms (206A)****Co-Chairs:** Josée Savard, PhD (Canada) and Dan Buysse, MD (USA)*11:00am – 11:15am***Monthly fluctuations of sleep and insomnia symptoms over the course of a year in a population-based sample**

Mélanie LeBlanc (Canada)

Charles M. Morin (Canada), Lynda Bélanger (Canada), Hans Ivers (Canada),

Marie-Andrée Côté (Canada)

*11:15am – 11:30am***Prevalence, course and long-term impact of non-restorative sleep: A five-year community-based follow-up study**

Jihui Zhang (USA)

Siu-Ping Lam (China), Shirley Xin Li (China), Mandy Wai-Man Yu (China),

Albert Martin Li (China), Yun-Kwok Wing (China)

*11:30am – 11:45am***The nature and prevalence of middle-of-the-night use of prescription hypnotics**

Thomas Roth (USA)

Patricia Berglund (USA), Victoria Shahly (USA), Alicia C. Shillington (USA),

Judith J. Stephenson (USA), Denise Cooke (USA), Nikhilesh Singh (USA),

Ronald Kessler (USA)

*11:45am – 12:00pm***Enhanced use-dependent plasticity in primary insomnia**

Rachel Marie E Salas (USA)

Joseph Galea (USA), Gabriela Cantarero (USA), Richard Allen (USA),

Charlene Gamaldo (USA), Michael Smith (USA), Barbara Lam (USA), Pablo Celnik (USA)

*12:00pm – 12:15pm***The role of androgen-deprivation therapy and hot flashes in the evolution of insomnia in patients with prostate cancer**

Josée Savard (Canada)

Séverine Hervouet (Canada), Hans Ivers (Canada)

*12:15pm – 12:30pm***Depressive symptomatology, medication persistence, and associated health care costs in older adults with insomnia**

Duru Golden Uzoma (Nigeria)

MONDAY, SEPTEMBER 12, 2011

11:00am – 12:30pm **O2: REM Behavior Disorders and Parasomnias (202)**

Co-Chairs: Carlos Schenck, MD (USA) and Yves Dauvilliers, MD (France)

11:00am - 11:15am

REM sleep behavior disorder in a large cohort of Parkinson's disease patients:

Frequency and associated factors

Friederike Sixel-Döring (Germany)

Ellen Trautmann (Germany), Brit Mollenhauer (Germany)

11:15am - 11:30am

Decision making in idiopathic REM sleep behavior disorder

Birgit Hôgl (Austria)

Laura Ehrmann (Austria), Margarete Delazer (Austria), Thomas Mitterling (Austria),

Viola Gschliesser (Austria), Laura Zamarian (Austria), Johanna Wenter (Austria),

Birgit Frauscher (Austria), Werner Poewe (Austria)

11:30am - 11:45am

Hippocampal perfusion predicts the emergence of neurodegenerative disease in idiopathic

REM sleep behavior disorder

Thien Thanh Dang-Vu (Canada)

Jean-François Gagnon (Canada), Mélanie Vendette (Canada),

Jean-Paul Soucy (Canada), Ron Postuma (Canada), Jacques Montplaisir (Canada)

11:45am - 12:00pm

Long term use of sodium oxybate in the treatment of childhood

narcolepsy-cataplexy

Meghna Mansukhani (USA)

Suresh Kotagal (USA)

12:00pm - 12:15pm

Sleep bruxism and headache in adolescents

Maria Clotilde Carra (Canada)

Nelly Huynh (Canada), Pierre Rompré (Canada), Gilles Lavigne (Canada),

12:15pm - 12:30pm

Impaired decision-making in idiopathic REM sleep behavior disorder

Taeko Sasai (Japan)

Takashi Abe (Japan), Tomoyuki Miyamoto (Japan), Yuichi Inoue (Japan)

MONDAY, SEPTEMBER 12, 2011**11:00am – 12:30pm O3: Sleep Breathing Disorders: Assessment, Morbidity, and Treatment Outcomes (206B)****Co-Chairs:** John Kimoff, MD (Canada) and Dalva Poyares, MD, PhD (Brazil)*11:00am - 11:15am***Validated questionnaires and an ambulatory monitor in the diagnosis of obstructive sleep apnea**

Effie Pereira (Canada)

Helen Driver (Canada), Steven Stewart (Canada), Michael Fitzpatrick (Canada)

*11:15am - 11:30am***Sleep disordered breathing, objective sleep quality and incident cardiovascular disease in older men: The MrOS sleep study**

Katie Stone (USA)

Terri Blackwell (USA), Paul Varosy (USA), Sonia Ancoli-Israel (USA), Douglas Bauer (USA), Kristine Ensrud (USA), Jane Cauley (USA), Reena Mehra (USA), Elizabeth Barrett-Connor (USA), Andrew Hoffman (USA), Susan Redline (USA)

*11:30am - 11:45am***Three years of recall: Clinical profile of OSA treatment**

Luciane Mello-Fujita (Brazil)

Camila Furtado Rizzi (Brazil), Elisangela Trevisan Mendonca (Brazil), Fatima Cintra (Bahamas), Terri E Eaver (USA), Sergio Tufik (Brazil), Dalva Poyares (Brazil)

*11:45am - 12:00pm***Objective outcomes and use of crp following maxillomandibular advancement surgery for treatment of obstructive sleep apnea**

Reginald Goodday (Canada)

Susan Bourque (Canada)

*12:00pm - 12:15pm***Targeted hypoglossal neurostimulation (THN) for the treatment of obstructive sleep apnea: Sleep data from a phase 1 safety and efficacy study**

Gimbada Benny Mwenge (Belgium)

*12:15pm - 12:30pm***Differences between intermittent users and adherent patients of CPAP treatment during the initial 6 months of treatment**

Rute Sampaio (Portugal)

M. Graça Pereira (Portugal), João Carlos Winck (Portugal)

MONDAY, SEPTEMBER 12, 2011

11:00am – 12:30pm

O4: Restless Legs Syndrome (RLS) and Movement Disorders in Sleep (204AB)

Co-Chairs: Diego Garcia-Borreguero, MD (Spain) and Yong-Won Cho, MD, PhD (Republic of Korea)

11:00am - 11:15am

Thalamo-cortical and subcortical connectivity in Restless Legs Syndrome: A resting state connectivity study using fMRI

Yong Won Cho (Republic of Korea)

Do Hyung Kim (Republic of Korea), Hyuk Won Chang (Republic of Korea),

Jeonghun Ku (Republic of Korea)

11:15am - 11:30am

Iron deficiency produces periodic leg movements during wake and sleep in rats

Yuan-Yang Lai (USA)

Darian Nguyen (USA), Kung-Chiao Hsieh (USA), Jerome Siegel (USA)

11:30am - 11:45am

Iron deficient anemia population: preliminary report on prevalence and characteristics of Restless Legs Syndrome

Michael Auerbach (USA)

Richard Allen (USA), Christopher Earley (USA)

11:45am - 12:00pm

Behavioral characterization of BTBD9 knockout mice - A potential model of restless legs syndrome

Mark DeAndrade (USA)

Li Zhang (USA), Thomas van Groen (USA), Russell Johnson (USA), Karen Gamble (USA),

Yuqing Li (USA)

12:00pm - 12:15pm

IV iron isomaltoside increases total ventral midbrain (VMB) iron in the iron-deprived murine model of RLS

Erica Unger (USA)

Lars Thomsen (Denmark), Daniela Lawton (USA), Christopher Earley (USA),

Richard Allen (USA)

2:15pm - 12:30pm

Relationship between interleukin iron levels and Restless Leg Syndrome in marathon runners

Sayonara Beatriz Ranciaro Fagundes (Brazil)

Derlei João Leite Fagundes (Brazil), André LL Bachi (Brazil),

Luciane Bizari Coin Carvalho (Brazil), João Eduardo C Carvalho (Brazil),

Lucila B. Fernandes Prado (Brazil), Mauro Vaisberg (Brazil), Gilmar Fernandes Prado (Brazil)

MONDAY, SEPTEMBER 12, 2011

12:30pm – 2:00pm **Industry Symposium (UCB) (2000CD)**

Restless Legs Syndrome Around the Clock

Chair: Richard Allen, PhD (USA)

Speakers: Richard Allen, PhD (USA); Luigi Ferini-Strambi, MD (Italy);
Diego Garcia-Borreguero, MD (Spain); David Rye, MD, PhD (USA)

Objectives:

1. Relate RLS dopamine pathology to the full 24 hour symptom pattern of RLS
2. Review indications of factors related to development of RLS augmentation
3. Present a 5-year prospective study of RLS treatment: a new standard for RLS drug treatment evaluation
4. Review the daytime symptoms of RLS
5. Describe implications of RLS daytime symptoms for diagnosis and treatment of RLS.
6. Review the relation between RLS augmentation and the dose and duration of treatment of RLS.

Summary:

Two major RLS issues generally ignored will be addressed in this symposium. First, daytime symptoms; there has been a growing awareness that RLS disrupts not only the evening and nighttime but also much of the day. The symptoms in the day have been largely ignored in part because they can be masked by activity but also because of the failure to appreciate the nature of the underlying RLS biological abnormalities. Second, long term treatment evaluation; RLS for many people once started persists for the rest of their life. The medication treatment will be for many years and there are indications that longer duration of treatment produces new adverse events. This requires longer term, e.g. 5 –year, prospective studies as a new standard for evaluating RLS medications. It also requires special attention to dose and duration of treatment relation to development of adverse events, particularly RLS augmentation.

12:30pm – 12:50pm

From preclinics to the RLS patient's needs: Is there a rationale for a 24 hours treatment?

Richard Allen, PhD (USA)

12:50pm – 1:10pm

Efficacy and safety of rotigotine transdermal patch: A 5-year prospective, multinational, open-label study

Luigi Ferini-Strambi, MD (Italy)

1:10pm – 1:30pm

Daytime burden in RLS patients: A new paradigm from diagnosis to treatment?

Diego Garcia-Borreguero, MD (Spain)

1:30pm – 1:50pm

Relationship between clinically significant augmentation of RLS and dosage of transdermal rotigotine

David Rye, MD, PhD (USA)

1:50pm – 2:00pm

Questions and answers

MONDAY, SEPTEMBER 12, 2011

2:00pm – 3:00pm **Keynote Lecture (2000AB)**

Sleep, Learning, and Cognition

Matthew Walker, PhD

University of California at Berkeley, Berkeley (USA)

3:00pm – 3:30pm **Coffee Break (200ABC)**

3:00pm – 5:00pm **Poster Presentations (see pages 80-94) (200ABC)**

3:30pm – 5:00pm **Parallel Symposia 5-7**

S5: Dreams and Parasomnias (202)

Chair: Carlos H. Schenck, MD (USA)

Speakers: Tore Nielsen, PhD (Canada); Antonio Zadra, PhD (Canada); Isabelle Arnulf, MD, PhD (France); Carlos H. Schenck, MD (USA)

Objectives:

1. Identify subtypes and correlates of dream-enacting behaviors now known to occur among healthy populations.
2. Learn about the phenomenology of somnambulism and how mental processes can influence sleepwalkers' behaviors.
3. Learn which dreamlike mentations may be associated with sleepwalking and sleep terrors, and the consequences of this association.
4. Learn about the differential diagnosis of dream-enacting behaviors.

Summary:

Dreaming in association with non-RBD motor parasomnias has received insufficient attention clinically and in published reports. Nielsen contrasts the well-established existence and characteristics of dream-enacting behaviors among parasomnias such as RBD with the yet-to-be fully investigated occurrence of dream-enacting behavior in the general population. He will summarize the most recent literature on non-pathological dream-enacting behaviors and present new findings revealing an association with a self-report measure of imitative behaviors. Zadra notes how until the mid 1960s sleepwalking (SW) was thought to represent a dissociative state related to dreaming. It was subsequently considered as a disorder of arousal in which there occurs a physiological dysfunction in the neural regulation of generalized cortical activation. Although SW is often characterized in terms of its automatic behaviors and retrograde amnesia, ongoing work into the phenomenology of SW indicates that perceptual, cognitive and affective dimensions can play an important role in the subjective experience of adult SW. Zadra will present data indicating that some somnambulistic behaviors are construed by patients as being motivated by an intrinsic sense of urgency or underlying reason that accounts for their actions during their episodes. Arnulf discusses how since SW and sleep terrors (ST) are associated with a low or absent awareness and post-episode amnesia, there is a general consensus against a complex dream activity associated with SW/ST. However, in a study that retrospectively collected the mental content present at the very moment of the abnormal behavior in 43 adults with SW/ST, 71% reported at least one dreamlike mentation associated with a nocturnal motor episode. These mentations were mostly short and unpleasant. In some patients, dream-like mentation was elicited after a video-PSG monitored episode. The patients were mimicking the very behavior they were dreaming about. Schenck will discuss the differential diagnosis of dream-enacting behaviors, including RBD, nocturnal seizures, OSA "pseudo-RBD", NREM parasomnias (SW, ST, Sleep Related Eating Disorder), and Sleep Related Dissociative Disorders (in which the perceived dream can represent a dissociated memory of past traumatic experiences). Sleep lab video examples will be shown.

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S5: Dreams and Parasomnias (202) (cont'd)

3:30pm – 3:50pm

Correlates of non-pathological dream-enacting behaviors

Tore Nielsen, PhD (Canada)

3:50pm – 4:10pm

When sleepwalkers behave strangely: How sleep mentation impacts somnambulistic episodes

Antonio Zadra, PhD (Canada)

4:10pm – 4:30pm

Do sleepwalkers dream while sleepwalking?

Isabelle Arnulf, MD, PhD (France)

4:30pm – 4:50pm

The differential diagnosis of dream-enacting behaviors

Carlos H. Schenck, MD (USA)

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S6: Iron and RLS: Translational Research Connecting Molecular, Animal, Clinical and Treatment Studies (206A)

Chair: Richard Allen, PhD (USA)

Speakers: Richard Allen, PhD (USA); James Connor, PhD (USA); Erica Unger, PhD (USA); Christopher Earley, MD, PhD (USA); Yong-Won Cho, MD (Republic of Korea)

Objectives:

1. Present advances in understanding the biological basis for iron abnormalities in RLS both at a molecular level of cell functioning and a system level of iron transport regulation to the brain.
2. Present the new iron-murine model of RLS based on selection of appropriate inbred genetic strain, biology, behavior and treatment evaluations.
3. Review the epidemiological risk factors for RLS in relation to iron, age and gender.
4. Provide updated information on the utility and role of oral and IV iron treatments for RLS noting the relation to the iron biology of RLS.

Summary:

The iron abnormalities in RLS have long been recognized since the early work of Ekblom and Nordlander. There have been some really dramatic advances in understanding the iron pathology of RLS both at a cellular and systems level that is relevant for treatment considerations. At the cellular level studies have indicated abnormalities in iron management proteins consistent with abnormalities in mitochondrial regulation that occur both in brain and peripheral tissue. This indicates a somewhat pervasive iron management abnormality expressed more in some tissue, such as dopaminergic neurons. Autopsy and imaging studies have confirmed much of these findings in RLS patients. In addition, recent research has produced new concepts about brain iron regulation and transport of iron into the brain related to both iron status and expression of the risk-genes for RLS. A murine model has also been developed that with iron deficiency produces the iron pattern seen in RLS and its behavioral and iron management proteins further indicate the role of iron and the relative benefits of IV iron for changing brain iron status. Epidemiology data can now be seen to show the iron effects expected from the laboratory studies and provide indications of possible role for early intervention in RLS to improve long term outcomes. These all relate to data and recent experience on oral and IV iron treatments. Clinical experience with these treatments will be presented along with a discussion of possible future RLS treatment development based on the biology of RLS.

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S6: Iron and RLS: Translational Research Connecting Molecular, Animal, Clinical and Treatment Studies (206A) (cont'd)

3:30pm – 3:35pm

Introduction – Brief history of dopamine, iron and RLS. Epidemiology of iron relation to RLS
Richard P. Allen, PhD (USA)

3:35pm – 3:55pm

Blood-brain barrier and brain iron regulation in RLS
James Connor, PhD (USA)

3:55pm – 4:15pm

Genetically specific murine model of iron and RLS
Erica Unger, PhD (USA)

4:15pm – 4:35pm

Iron abnormalities in RLS: Molecular to systems
Christopher Earley, MD, PhD (USA)

4:35pm – 4:55pm

Advances in IV and oral iron treatment of RLS
Yong-Won Cho, MD (Republic of Korea)

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S7: New Technological Advances in OSA (204AB)

Chair: Christian Guilleminault, MD, PhD (USA)

Speakers: Christian Guilleminault, MD, PhD (USA); Oscar Carrillo, MD (USA); Stephen Schendell, MD, DSS (USA); Song Toh, Eng (Singapore)

Objectives:

1. Inform about new technologies for sleep apnea evaluation.
2. Indicate potential and current role for each technology.
3. Evaluate appropriate use of each of the new technologies.

Summary:

Technical advances serve to improve understanding of sleep apnea (OSA) and its treatment options. Expiratory muscle recordings integrated into regular polysomnograms help diagnose OSA syndromes and calibrate nasal CPAP treatments. Oscar Carrillo has developed this technique for normal controls and patients. 3-dimensional CT is a new investigation tool that allows visually exploring the upper airway before and after surgery for children and adults. Stephen Schendel has used this and various other methods to image the airway. 3-H Rhinometry, new for rhinometry, is based on computational fluid dynamics. It is now the standard accepted by the international rhinology society. Application guidelines were established in 2010. This test is easily performed by non-ENT specialists and it gives important information on nasal resistance (60% of upper airway resistance). This significantly impacts diagnosis and treatment of OSA (including nasal CPAP usage). It can be combined with acoustic rhinometry.

3:30pm – 3:35pm

Introduction and review of current problems

Christian Guilleminault, MD, PhD (USA)

3:35pm – 4:00pm

Expiratory muscle during sleep and nasal CPAP

Oscar Carrillo, MD (USA)

4:00pm – 4:25pm

Imaging the upper airway (3-D CT)

Stephen Schendel, MD, DSS (USA)

4:25pm – 4:50pm

Nasal resistance and 3-H Rhinometry

Song Toh, BEng (Singapore)

MONDAY, SEPTEMBER 12, 2011**3:30pm – 5:30pm Technologists Workshops (206B)***3:30pm – 4:30pm***Medications and Sleep: Effects on PSG**

James MacFarlane, PhD (Canada)

*4:30pm – 5:30pm***Patient Education: Sleep Hygiene for Parents and Adolescents**

Reut Gruber, PhD (Canada) and Merrill Wise, MD (USA)

5:00pm – 6:30pm Parallel Symposia 8-10**S8: Sleep Disorders in Women: Is Gender a Risk Factor? (202)****Co-Chairs:** Rosalia Silvestri, MD (Italy) and Helen Driver, PhD (Canada)**Speakers:** Roseanne Armitage, PhD (USA); Rosalia Silvestri, MD (Italy); Mauro Manconi, MD, PhD (Italy); Teresa Paiva, MD (Portugal)**Objectives:**

1. Discuss gender-related risk factors for sleep disorders.
2. Review gender-specific symptoms within sleep disorders and neuropsychiatric co-morbidity.
3. Consider the impact of sleep disorders on life quality, work and social skills.
4. Discuss therapy tailored according to specific life cycles.

Summary:

Gender is a major factor orienting organic and psychosomatic disorders, their frequency, distribution, presenting symptoms, work and life quality, as well as therapeutic response. Sleep disorders are no exception to this rule even if gender related differences have not always been adequately addressed. Women are more prone to insomnia, secondary to anxiety and mood disorders. Special life cycles connected to fertility, such as pregnancy or menopause, are linked to an increase of organic sleep alterations which may endanger women's health and increase cardiovascular risk, needing therefore a prompt diagnosis and therapeutic strategy.

*5:00pm – 5:20pm***Insomnia and depression in women: Gender as a risk factor**

Roseanne Armitage, PhD (USA)

*5:20pm – 5:40pm***Sleep apnea in women across their life cycle: When and why?**

Rosalia Silvestri, MD (Italy)

*5:40pm – 6:00pm***RLS in women: Prevalence, symptoms and gender specific risk factors**

Mauro Manconi, MD, PhD (Italy)

*6:00pm – 6:20pm***Fibromyalgia and headache severely affect sleep in women**

Teresa Paiva, MD (Portugal)

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S9: Advances in the Diagnosis and Management of Sleep Disorders in Older Adults (204AB)

Chair: Michael Vitiello, PhD (USA)

Speakers: Claudia Trenkwalder, MD (Germany); Eus van Someren, PhD (Netherlands); Phillis Zee, MD, PhD (USA); Michael Vitiello, PhD (USA)

Objectives:

1. Review the identification and treatment of sleep disorders for patients with Parkinson's disease.
2. Review how poor sleep can be a final common path of many different underlying causes.
3. Describe how clock-related sleep problems may benefit from a brighter environment, but that effects are variable and may take long to develop.
4. Review the recent findings on the relationship between physical activity and sleep quality in older adults.
5. Describe findings of the effects of exercise and social activity programs on sleep quality and cognitive performance.
6. Review the recent findings on the interrelationship between sleep and pain.
7. Describe findings on the effects of cognitive behavioral therapy on sleep quality and perceived pain in older adults with co-morbid osteoarthritis and insomnia.

Summary:

Sleep disorders are very common in older adults and have significant impact on quality of life, morbidity and possibly mortality. Effective diagnosis and management of sleep disorders in older adults are often complicated by the presence of co-morbid illnesses (e.g.; neurological and dementing disorders, pain syndromes) that increase in prevalence with age and in many cases by the long term care environment in which some older adults dwell. This symposium will address issues of effective diagnosis and treatment of sleep and circadian disorders in four populations of community-dwelling and institutionalized older adults.

5:00pm – 5:20pm

Sleep as analgesic: Cognitive behavioral treatment of pain and sleep disturbance in older adults with comorbid osteoarthritis and insomnia

Michael V. Vitiello, PhD (USA)

5:20pm – 5:40pm

Structured social and physical activity: Impact on sleep and performance in older adults

Phyllis C. Zee, MD, PhD (USA)

5:40pm – 6:00pm

Sand in the machine: Clocks, sleep and brain function in aging and dementia

Eus van Someren, PhD (Netherlands)

6:00pm – 6:20pm

Sleep and sleep disorders in Parkinson's Disease: Problems of recognition and treatment

Claudia Trenkwalder, MD (Germany)

MONDAY, SEPTEMBER 12, 2011

3:30pm – 5:00pm

S10: Neuromuscular Disorders and Sleep (206A)

Co-Chairs: Luc Laberge, PhD (Canada) and Yves Dauvilliers, MD, PhD (France)

Speakers: Luc Laberge, PhD (Canada); Yves Dauvilliers, MD, PhD (France); Jean-Louis Pépin, MD, PhD (France); Giacomo Della Marca, MD, PhD (Italy)

Objectives:

1. How breathing is affected when respiratory muscles are compromised.
2. Which rating scales and tests identify specific breathing and sleep problems.
3. REM sleep characteristics and sleep-related motor activation in myotonic dystrophy.
4. How breathing and sleep problems differ in myotonic dystrophy and facioscapulohumeral muscular dystrophy.

Summary:

Patients with neuromuscular disorders (NMD) are particularly vulnerable to sleep-related dysfunction. Sleep disorders in this patient population though remain poorly recognized by health care providers, and in some instances, by patients themselves. Symptoms of sleep disorders may namely be confused with those of the underlying disease, especially so in multi systemic NMD. Sleep-disordered breathing (SDB) often predates diurnal respiratory failure in NMD patients, necessitating timely recognition and management with non invasive ventilator support. Involvement of the peripheral and/or central nervous system may also impinge upon sleep, with the relative contribution of each varying with the specific disorder. Hence, patients with NMD must be routinely and systematically assessed for sleep-related complaints and SDB and since these constitute treatable complications in an otherwise progressive disease process. Their prompt recognition and treatment may improve quality of life and affect survival in patients. This symposium reviews the mechanisms, diagnostic evaluation, and management of sleep disorders in two of the most common forms of muscular dystrophy among adults, myotonic dystrophy and facioscapulohumeral muscular dystrophy.

5:00pm – 5:20pm

Cognitive dysfunction, impaired vigilance, daytime sleepiness, and fatigue in myotonic dystrophy: A continuum of care?

Luc Laberge, PhD, (Canada)

5:20pm – 5:40pm

Daytime sleepiness and REM-sleep characteristics in myotonic dystrophy

Yves Dauvilliers, MD, PhD, (France)

5:40pm – 6:00pm

Overview of sleep breathing disorders in myotonic dystrophy: Implications in cardiovascular consequences

Jean-Louis Pépin, MD, PhD, (France)

6:00pm – 6:20pm

Sleep disordered breathing in facioscapulohumeral muscular dystrophy.

Giacomo Della-Marca, MD, PhD, (Italy)

MONDAY, SEPTEMBER 12, 2011

- 3:30pm – 5:00pm **Canadian Academy of Dental Sleep Medicine (201B)**
- 7:00pm - 10:00pm **Dinner Cruise, St. Lawrence River**
- 7:00pm – 10:00pm **Banquet Dinner (Ticketed)**
Château Frontenac

TUESDAY, SEPTEMBER 13, 2011**7:00am – 6:00pm On-Site Registration****8:00am – 9:00am Keynote Lecture (2000AB)****Sleep-Disordered Breathing in Pregnancy: Effects on the Fetus**

Collin Sullivan, MD, PhD

University of Sydney, Sydney (Australia)

9:00am – 10:30am Parallel Symposia 11-14**S11: Sleep and Cancer: From Diagnosis to Survivorship (206A)****Chair:** Sonia Ancoli-Israel, PhD (USA) and Josée Savard, PhD (Canada)**Speakers:** Sonia Ancoli-Israel, PhD (USA); Leanne Fleming, PhD (United Kingdom); Josée Savard, PhD (Canada); Ann M. Berger, PhD (USA)**Objectives:**

1. To learn about the significance of sleep disturbances in cancer patients.
2. To gain knowledge on possible associations of sleep disturbances and sleep/wake cycles impairments with other cancer-related symptoms (e.g., fatigue, cognitive impairments).
3. To hear about possible links with physiological factors (e.g., cancer treatments, hormone levels).

Summary:

Research in the past ten years has been extremely helpful in estimating the prevalence of sleep disturbances in cancer and in evaluating the natural course of sleep symptoms across the cancer care trajectory. Nevertheless, there is still much to be learned about which factors are associated with an increased risk of developing sleep difficulties and their possible consequences. Our symposium will present pioneering findings on these questions in newly diagnosed patients all the way to cancer survivors. Leanne Fleming will present on an ongoing longitudinal study of newly diagnosed breast cancer patients. Preliminary data will be presented on the course of sleep status from diagnosis, through active treatment and follow up. Factors explaining why insomnia develops and how poor sleep affects other cancer-related symptoms will also be considered. Sonia Ancoli-Israel will discuss the sleep, fatigue, circadian activity rhythms and cognition in women newly diagnosed with breast cancer. Cognitive impairment is common in women undergoing chemotherapy, called chemobrain, but little is still known about the etiology. Some of the symptoms of chemobrain are similar to symptoms of sleep deprivation. Data will be presented on the longitudinal course of changes in sleep, fatigue and cognition in women with breast cancer. Josée Savard will be talking about the role of cancer treatments in the evolution of insomnia symptoms. She will present results of a longitudinal study conducted in 962 patients with mixed cancer sites, over an 18-month period following surgery. The final presentation by Ann Berger will focus on sleep and circadian activity rhythms and their relationship with fatigue, functioning, and body mass index in breast cancer survivors 1-year after the first adjuvant chemotherapy treatment. Data will be presented on differences in relationships between variables based on BMI status (normal, overweight, obese).

TUESDAY, SEPTEMBER 13, 2011

9:00am – 10:30am **S11: Sleep and Cancer: From Diagnosis to Survivorship (206A) (cont'd)**

9:00am – 9:20am

The impact of poor sleep and fatigue on cognition in breast cancer

Sonia Ancoli-Israel, PhD (USA)

9:20am – 9:40am

Understanding the development of persistent insomnia in breast cancer patients

Leanne Fleming, PhD (United Kingdom)

9:40am – 10:00am

The role of cancer treatments in the evolution of insomnia throughout the cancer care trajectory

Josée Savard, PhD (Canada)

10:00am – 10:20am

Circadian activity rhythms, functioning, fatigue, and body mass index in early breast cancer survivors

Ann M. Berger, PhD (USA)

TUESDAY, SEPTEMBER 13, 2011

9:00am – 10:30am **S12: Circadian Aspects to Sleep Regulation: From Molecules to Integrated Functions (206B)**

Chair: Valerie Mongrain, PhD (Canada)

Speakers: Paul Shaw, PhD (USA); Paul Franken, PhD (Switzerland); Antoine Viola, PhD (Switzerland); Christina Schmidt, PhD (Switzerland)

Objectives:

1. Identify which specific clock molecular elements are involved in sleep homeostasis in flies, mice and humans.
2. Describe the precise contribution of these clock elements to sleep intensity and its rebound after sleep deprivation also in the three species.
3. Emphasize the contribution of circadian and homeostatic interaction onto complex human behaviour and waking quality.

Summary:

Sleep is a required behaviour and sleep loss impairs central nervous system functioning and various other health dimensions. Sleep is governed by a circadian timing system and a sleep homeostat which ensure, respectively, proper adaptation to the light-dark environment and tracking of time spent awake and asleep. More precisely, sleep homeostasis refers to the recovery capacity of sleep which adapts sleep intensity as a function of wakefulness duration. Although it was originally assumed that these two processes act in an independent manner to regulate sleep and wakefulness, recent animal and human data strongly suggest that both processes interact in a non-linear manner. In particular, genes involved in the regulation of circadian timing (i.e. clock genes) have been shown to contribute to the molecular wiring of the homeostatic process. Moreover, at the system level, circadian and homeostatic interaction has been shown to determine various neural correlates of waking quality. This symposium will present forefront findings from flies, mice and humans regarding the complex molecular and system level connections between the circadian timing system and the recovery process of sleep regulation.

9:00am – 9:20am

The role of clock genes in regulating sleep homeostasis

Paul Shaw, PhD (USA)

9:20am – 9:40am

What is driving Period-2 expression: Corticosterone, wakefulness, the circadian clock, or all of the above?

Paul Franken, PhD (Switzerland)

9:40am – 10:00am

Age-dependent inter-individual differences in sleep homeostasis and circadian rhythmicity

Antoine Viola, PhD (Switzerland)

10:00am – 10:20am

Circadian and sleep homeostatic interaction patterns on human cognition-related cerebral activity

Christina Schmidt, PhD (Switzerland)

TUESDAY, SEPTEMBER 13, 2011

9:00am – 10:30am **S13: Pediatric Sleep Disordered Breathing (204AB)**

Chair: Oliviero Bruni, MD (Italy)

Speakers: Sabine Scholle, MD (Germany); Cheng-Hui Lin, MD (Taiwan); Stacey Quo, DDS (USA); Nelly Hyun, PhD (Canada)

Objectives:

1. Inform about new normative data on polysomnographic analysis of a large group of normal children during sleep.
2. Explain how to evaluate polygraphic breathing patterns that have significant clinical impact but are not integrated in currently accepted polysomnographic evaluation of pediatric SDB.
3. Review orthodontic symptoms that may suggest abnormal breathing during sleep.
4. Present the gains and limits of orthodontic treatments that for pediatric OSA.

Summary:

Children with sleep-disordered breathing may not be recognized and treated when performing polysomnography and applying the currently accepted standards for identification of these events. New normative data on breathing during sleep that identifies apneas and hypopneas have been obtained on a large group of children. These provide new normative standards requiring changes in the criteria for abnormal sleep-disordered breathing. New investigations by Scholle, Lin and others have also outlined the limits of the current sleep-disordered-breathing scoring system, and identified currently unscored patterns indicative of abnormal breathing in children. Several international articles have indicated that the most common treatment of SDB in children (adenotonsillectomy) do not cure children. This is part due to facial anatomic problems inducing orthodontic symptoms that complicate the diagnosis and treatment. Orthodontic evaluation and treatment approaches serve to complement the known treatment of OSA but they also have significant limitations. Quo and Hyun will review these important and often overlooked orthodontic issues for sleep-disordered breathing in children.

9:00am – 9:20am

Sleep and Breathing in 209 normal German Children: Are the AASM guidelines valid?

Sabine Scholle, MD (Germany)

9:20am – 9:40am

Current ASSM hypopnea scoring underscores pediatric sleep disordered breathing

Cheng-Hui Lin, MD (Taiwan)

9:40am – 10:00am

Benefits and limits of orthodontic approaches in treatment of pediatric OSA

Stacey Quo, DDS (USA)

10:00am – 10:20am

Symptoms indicating OSA as seen by pediatric dentists and orthodontists

Nelly Hyun, PhD (Canada)

TUESDAY, SEPTEMBER 13, 2011

9:00am – 10:30am **S14: Challenges of long-term management of the Restless Legs syndrome (202)**

Sponsored in part by an Unrestricted Educational Grant from Xenoport

Chair: Richard Allen, PhD (USA)

Speakers: Diego Garcia-Borreguero, MD (Spain); Philip Becker, MD (USA);
Christopher Earley, MD, PhD (USA)

Objectives:

1. Recognize the major problems with Long-term RLS treatments.
2. Appreciate the relation of RLS biology to long-term treatment outcomes.
3. Know how to use new evaluation and treatment options for RLS long-term management
4. Understand problems and treatment options for RLS augmentation

Summary:

Dopaminergic and other treatments provide dramatic immediate relief from RLS symptoms but RLS is a chronic condition that once started will for many persist for a lifetime. The long-term follow-up of patients on the currently approved oral dopamine agonists show satisfactory outcomes for only about 25% of the patients and perhaps fewer over longer term treatment. New clinical problems have been found to emerge during long-term treatment limiting oral dopamine treatment benefits. These include depression, poor sleep, impulsive behaviors, loss-of-efficacy and augmentation of RLS symptoms to become worse than they were before treatment. The augmentation problem when severe poses particularly difficult management challenges. Recent scientific and clinical studies regarding the biology of RLS and the long-term outcome of treatments provide new information that may serve to improve long-term care of RLS. These combined with growing clinical experience provide indications for options and treatment approaches to avoid or reduce the risks of long-term treatment problems. This symposium will address questions regarding problems with long-term treatment and the options for using newer treatment alternatives. Practical long-term treatment approaches will be reviewed including considerations of when and how to switch medications.

9:00am – 9:20am

RLS biology and morbidity: Significance for long-term treatment

Richard Allen, PhD (USA)

9:20am – 9:40am

Impulse control problems: Occurrence and management during long-term treatment

Philip Becker, MD (USA)

9:40am – 10:00am

Augmentation and loss of efficacy: Identification and prevention.

Diego Garcia-Borreguero, MD (Spain)

10:00am – 10:20am

Problems managing RLS augmentation: When and how to add or switch medications

Christopher Earley, MD, PhD (USA)

TUESDAY, SEPTEMBER 13, 2011

10:00am – 5:00pm **Exhibition (200ABC)**

10:30am – 11:00am **Coffee Break (200ABC)**

11:00am – 12:30pm **Technologists Workshops (French) (207)**

Scoring (Critères d'analyse pour les tracés complexes)
Natalie Morin, RPSGT (Canada)

11:00am – 12:30pm **Oral Paper Presentations (Sessions 5-9)**

O5: Aging and Developmental Issues (206A)

Co-Chairs: Julie Carrier, PhD (Canada) and Phyllis Zee, MD, PhD (USA)

11:00am - 11:15am

The epidemiology of sleep and its disorder in chinese children aged 0-5 years

Xicheng Liu (China)

Xiaona Huang (China), Huishan Wang (China), Jingxiong Jiang (China), Lin An (China)

11:15am - 11:30am

Associations between sleep problems and internalizing troubles: A longitudinal study of the french tempo cohort

Evelyne Touchette (France)

Aude Chollet (France), Cédric Galéra (France), Eric Fombonne (Canada), Bruno Falissard (France), Michel Boivin (Canada), Maria Melchior (France)

11:30am - 11:45am

Increased slow-wave sleep in response to prolonged exercise after 4 months of endurance training in older men

Michel O. Melancon (Canada)

Dominique Lorrain (Canada), Isabelle J. Dionne (Canada)

11:45am - 12:00pm

Spindles and slow waves are associated to verbal learning in older subjects

Marjolaine Lafortune (Canada)

Jean-François Gagnon (Canada), Véronique Latreille (Canada), Jacques Montplaisir (Canada), Julie Carrier (Canada)

12:00pm - 12:15pm

Association between subjective sleep quality and incident cognitive impairment in community-dwelling older men and women

Olivier Potvin (Canada)

Dominique Lorrain (Canada), Hélène Forget (Canada), Micheline Dubé (Canada), Sébastien Grenier (Canada), Michel Prévile (Canada), Carol Hudon (Canada)

TUESDAY, SEPTEMBER 13, 2011

11:00am – 12:30pm **O6: Chronobiology/Circadian Disorders (204AB)**

Co-Chairs: Francisco Javier Puertas, MD (Spain) and Joseph DeKoninck, PhD (Canada)

11:00am - 11:15am

Body temperature regulation across menstrual circadian and sleep-wake states

Ari Shechter (Canada)

Philippe Boudreau (Canada), Diane Boivin (Canada)

11:15am - 11:30am

Cortisol and melatonin rhythms dissociation during an antarctic summer expedition: Evidence for two distinct circadian oscillators

Nathalie Pattyn (Belgium)

Aisha Cortoos (Belgium), Olivier Mairesse (Belgium), Elke De Valck (Belgium),

Raymond Cluydts (Belgium), Pierre-Francois Migeotte (Belgium), Xavier Neyt (Belgium)

11:30am - 11:45am

Night shift work and their association with metabolic syndrome

Juan Carrillo (Chile)

Jacqueline Peters (Chile), Gisella Arellano (Chile), Mariana Dastres (Chile), Claudio Morales (Chile),

Jecar Neghme (Chile)

11:45am - 12:00pm

Natural circadian phase-shifts during summer nightwork in police officers

Jeanne Sophie Martin (Canada)

Alexandre Sasseville (Canada), Joëlle Lavoie (Canada), Jérôme Houle (Canada)

12:00pm - 12:15pm

Circadian misalignment as an endophenotype for depression

Nevin Zaki (Egypt)

Katharina Wuff (United Kingdom), Russel Foster (United Kingdom), Guy Goodwin (United Kingdom)

12:15pm - 12:30pm

Light therapy for treatment of fatigue and sleepiness following traumatic brain injury

Kelly Sinclair (Australia)

Jennie Ponsford (Australia), Steven W. Lockley (Australia), Shantha M.W. Rajaratnam (Australia)

TUESDAY, SEPTEMBER 13, 2011

11:00am – 12:30pm

07: Insomnia Therapeutic Approaches (202)

Co-Chairs: Leanne Fleming, PhD (United Kingdom) and Thomas Roth, PhD (USA)

11:00am - 11:15am

Is a self-help book better than sleep hygiene advice? A randomized controlled trial of insomniacs

Bjørn Bjorvatn (Norway)

Eldbjørg Fiske (Norway), Ståle Pallesen (Norway)

11:15am - 11:30am

Effects of cognitive behavioral therapy for stress-induced sleep disturbance and hyperarousal

Shun Nakajima (Japan)

Isa Okajima (Japan), Masaki Nakamura (Japan), Akira Usui (Japan), Shingo Nishida (Japan),

Kenichi Hayashida (Japan), Yuichi Inoue (Japan)

11:30am - 11:45am

Comparative efficacy of behavior therapy and cognitive therapy as single therapies for insomnia: A preliminary report

Charles M. Morin (Canada)

Allison Harvey (USA), Lynda Bélanger (Canada), Simon Beaulieu-Bonneau (Canada),

Emilie Fortier-Brochu (Canada), Polina Eidelman (USA), Lisa Talbot (USA), Hans Ivers (Canada)

11:45am - 12:00pm

Effect of pregabalin on quantitative electroencephalography (qEEG) during non-REM sleep in patients with fibromyalgia and sleep maintenance difficulties

Frederick J. Wilson (United Kingdom)

E. Malca Resnick (USA), Jon Freeman (USA), Verne Pitman (USA), Pritha Bhadra (USA),

Thomas Roth (USA)

12:00pm - 12:15pm

SKP-1041 a novel modified-release formulation of zaleplon significantly improves sleep in patients with middle-of-the-night awakening: Results of a phase II double-blind crossover placebo-controlled dose-ranging trial

James K. Walsh (USA)

David Seiden (USA), Beth Safirstein (USA), Alan Lankford (USA), Gary Zammit (USA), Jon Freeman

(USA), Steven Hull (USA), Russell Rosenberg (USA)

12:15pm - 12:30pm

Effect of middle-of-the-night doses of zolpidem sublingual tablet 3.5 mg on next-morning driving performance

Annemiek Vermeeren (Netherlands)

Tim R. M. Leufkens (Netherlands), Cees Van Leeuwen (Netherlands), Anita Van Oers (Netherlands),

Eric Vuurman (Netherlands), Nikhilesh N. Singh (USA), Frank Steinberg (USA), Salvador Rico (USA),

Eugene Laska (USA), Thomas Roth (USA)

TUESDAY, SEPTEMBER 13, 2011

11:00am – 12:30pm **O8: Sleep Deprivation (206B)**

Co-Chairs: Gilles Lavigne, DMD, PhD (Canada) and Marco Zucconi, MD (Italy)

11:00am - 11:15am

The association between short sleep duration and weight gain is dependent on disinhibited eating behavior in adults

Jean-Philippe Chaput (Canada)

Jean-Pierre Després (Canada), Claude Bouchard (USA), Angelo Tremblay (Canada)

11:15am - 11:30am

Manipulating sleep duration alters cognitive and emotional functioning in children

Jennifer Vriend (Canada)

Fiona Davidson (Canada), Sunny Shaffner (Canada), Penny Corkum (Canada), Ben Rusak (Canada)

11:30am - 11:45am

Association between sleep homeostasis and a synaptic adhesion molecule

Janine El Helou (Canada)

Erika Belanger Nelson (Canada), Stéphane Dorsaz (Switzerland), Thomas Curie (Switzerland),

Paul Franken (Switzerland), Valerie Mongrain (Canada)

11:45am - 12:00pm

Paradoxical sleep deprivation potentiates the development of oral dyskinesia in mice: Role of oxidative stress

Juliana Castro (Brazil)

Vanessa Abilio (Brazil), Sergio Tufik (Brazil), Roberto Frussa-Filho (Brazil)

12:00pm - 12:15pm

New discoveries in the in vivo influence of corticothalamic feedback in sleep spindles

Maxime Bonjean (USA)

Maxime Lemieux (Canada), Igor Timofeev (Canada), Terrence Sejnowski (USA),

Maxim Bazhenov (USA)

12:15pm - 12:30pm

Short-term partial sleep deprivation: effects on emotion regulation of healthy adults

Nanette S. Danielsson (Sweden)

Shane MacDonald (Sweden), Markus Jansson-Fröjmark (Sweden), Steven J. Linton (Sweden),

Allison G. Harvey (USA)

TUESDAY, SEPTEMBER 13, 2011

11:00am – 12:30pm

O9: Restless Legs Syndrome (RLS) and Movement Disorders in Sleep (2000AB)

Co-Chairs: Claudia Trenkwalder, MD (Germany) and Luigi Ferini-Strambi, MD (Italy)

11:00am - 11:15am

Randomized double-blind placebo-controlled study on the efficacy and safety of gabapentin enacarbil in Japanese patients with primary restless legs syndrome

Yuichi Inoue (Japan)

Naohisa Uchimura (Japan), Kenji Kuroda (Japan), Koichi Hirata (Japan), Nobutaka Hattori (Japan)

11:15am - 11:30am

Are restless legs syndrome and periodic leg movements during sleep associated with cardiovascular abnormalities?

Marie-Helene Pennestri (Canada)

Jacques Montplaisir (Canada), Robert Amyot (Canada), Dominique Petit (Canada),

Paola A Lanfranchi (Canada)

11:30am - 11:45am

Is restless legs syndrome an important predictor of subcortical stroke?

A prospective study on 117 stroke patients

Anupama Gupta (India)

Garima Shukla (India), Afsar Mohammed (India), Vinay Goyal (India), Achal Srivastava (India),

Madhuri Behari (India)

11:45am - 12:00pm

Iron infusion in restless legs syndrome in the third trimester of pregnancy

Juliane Schneider (Switzerland)

Alexander Krafft (Switzerland), Annika Bloch (Switzerland), Astrid Huebner (Switzerland),

Monika Raimondi (Switzerland), Christian Baumann (Switzerland), Esther Werth (Switzerland),

Claudio Bassetti (Switzerland)

12:00pm - 12:15pm

Relationship between clinically significant augmentation of restless legs syndrome (RLS) and dosage of rotigotine transdermal system: Post hoc analysis of a 5-year prospective multinational open-label study

Luigi Ferini-Strambi (Italy)

Ralf Kohnen (Germany), Heike Beneö (Germany), Birgit Högl (Austria), Wolfgang Oertel (Germany),

Claudia Trenkwalder (Germany), Andreas Fichtner (Germany), Erwin Schollmayer (Germany),

Diego García-Borreguero (Spain)

12:15pm - 12:30pm

Exome sequencing of two individuals with early onset familial ekbom syndrome

Jacinda Sampson (USA)

Lisa Baird (USA), Jeff Stevens (USA), Nori Matsunami (USA), Mark Leppert (USA)

TUESDAY, SEPTEMBER 13, 2011

12:30pm – 2:00pm **Industry Symposium (Respironics) (2000CD)**

Data Management: Detection and Deployment

Moderator: Cheryl Needham (USA)

Speakers: Richard Berry, MD (USA); Sam Kuna, MD (USA)

Objectives:

1. To gain an understanding of differences in methods used to detect breathing events from a device compared to full clinical polysomnography.
2. To gain insight in applying information about therapy efficacy and adherence in managing patients with OSA.
3. Review a patient management pathway utilizing portable diagnostic and device technology to initiate and manage therapy for the OSA patient.

Summary:

This symposium will discuss the comparison of breathing events identified by a CPAP device to a full polysomnograph, as well as, how to use the information to deploy the correct clinical titration and treatment pathway.

12:30pm – 1:10pm

Comparison of event detection vs. polysomnography

Richard Berry, MD (USA)

1:10pm – 1:50pm

Clinical deployment of event detection

Sam Kuna, MD (USA)

1:50pm – 2:00pm

Questions

12:30pm – 2:00pm **Canadian Sleep Research Consortium (204AB)**

2:00pm – 3:00pm **Keynote Lecture (2000AB)**

Sleep, Sleepiness, and Safety on the Road

Pierre Philip, MD, PhD

Université de Bordeaux et Centre Hospitalier Universitaire, Bordeaux (France)

3:00pm – 3:30pm **Coffee Break (200ABC)**

3:00pm – 5:00pm **Poster Presentations (see pages 94-109) (200ABC)**

TUESDAY, SEPTEMBER 13, 2011

3:30pm – 5:00pm

Parallel Symposia 15-17

S15: Chronic Insomnia - From Psychology to Neurobiology (206A)

Chair: Dieter Riemann, PhD (Germany)

Speakers: Dieter Riemann, PhD (Germany); Eus van Someren, PhD (Netherlands); Célyne Bastien, PhD (Canada); Daniel Buysse, MD (USA)

Objectives:

1. To understand the hyperarousal concept of insomnia on an integrative level.
2. To delineate the importance of neurobiological methods for the understanding of insomnia.
3. To highlight the importance of novel research approaches and theories for further progress in the field.

Summary:

Chronic insomnia is among the most frequent sleep disorders world-wide and afflicts up to 10% of the general population. Insomnia not only leads to severe sleep disturbances but beyond is coupled with daytime sequelae like impaired attention, cognition, etc. and in the long run may even be associated with increased risk for depression, cardiovascular disorders and obesity. Till recently, insomnia was mainly conceptualized as a psychological problem resulting from hyperarousal on a cognitive or emotional level. The last decade has seen an increased interest in applying state of the art neurobiological methods to the condition of insomnia. These include spectral analysis of the sleep EEG, cortisol and immunological measurements and imaging methods like MR, fMRI, SPECT or PET. The symposium will cover most recent approaches and studies in the field aiming at the hyperarousal concept by integrating research from different sources. Hopefully, this type of combined and integrative endeavour will shed more light on the psychophysiology of chronic insomnia.

3:30pm – 3:50pm

The hyperarousal concept of chronic insomnia – State of the art

Dieter Riemann, PhD (Germany)

3:50pm – 4:10pm

New ways to understand insomnia: From web-based assessments to brain imaging

Eus van Someren, PhD (Netherlands)

4:10pm – 4:30pm

Insomnia types and information processing during the night: Measures of N1 and P2

Célyne Bastien, PhD (Canada)

4:30pm – 4:50pm

Where in the brain is insomnia? Results of PET studies

Daniel Buysse, MD (USA)

TUESDAY, SEPTEMBER 13, 2011

3:30pm – 5:00pm

S16: Circadian Adjustment: Does it Help or Hinder Shift Workers? (204AB)

Chair: Diane Boivin, MD, PhD (Canada)

Speakers: Diane Boivin, MD, PhD (Canada); Shantha M. Rajaratnam, PhD (Australia); Alec J. Davidson, PhD (USA);

Objectives:

1. Recognize the impacts of disrupted sleep-wake cycles and circadian rhythms in shift-workers.
2. Understand the rationale for interventions designed to correct the phase angle between the endogenous circadian system and the sleep-wake cycle in shift workers.
3. Learn the health consequences of repeated clock shifting in animals.
4. Appreciate the benefits and limitations of approaches that increase the rate of circadian adaptation in shift workers.

Summary:

Shift work often results in acute and repetitive shifts between the circadian system and the sleep-wake schedule. It is believed this circadian misalignment and its associated sleep disruption contribute substantially to shift workers' complaints and their increased risk of developing several medical conditions such as cardiovascular, endocrine, psychological disorders and even cancer. Remodeling the diurnal pattern of light and darkness exposure belongs to sophisticated interventions, specifically designed to correct shift workers' circadian misalignment. However, the repetitive cycling between work and rest days leads to instability in the entrained circadian phase. Observations drawn from animal studies raise justifiable health concerns that call for more research and debate.

Diane Boivin will introduce the symposium, summarize available countermeasures for disrupted sleep-wake cycles and her own studies on the impacts of circadian misalignment in nurses and police officers. Shantha Rajaratnam will present results on the adverse negative consequences of night work in police studies and how circadian adjustment can be achieved rapidly. Alec Davidson will discuss the health consequences of repeated clock shifting in animal models. The symposium will then be open for general discussion.

3:30pm – 3:55pm

Countermeasures for improving shift workers' adaptation

Diane B. Boivin, MD, PhD (Canada)

3:55pm – 4:20pm

Adverse health and safety outcomes associated with shiftwork: Interventions to promote rapid circadian adaptation

Shantha M. Rajaratnam, PhD (Australia)

4:20pm – 4:45pm

Health consequences of circadian disruption in animal models

Alec J. Davidson, PhD (USA)

TUESDAY, SEPTEMBER 13, 2011

3:30pm – 5:00pm

S17: Sleep Disturbances and Attention-Deficit/Hyperactivity Disorder: Shared Mechanisms and Clinical Implications (202)

Co-Chair: Samuele Cortese, MD, PhD (France) and Reut Gruber, PhD (Canada)

Speakers: Samuele Cortese, MD, PhD (France); Penny Corkum, PhD (Canada); Reut Gruber, PhD (Canada); Barbara Fisher, PhD (USA)

Objectives:

To be aware of the main findings of the literature exploring the comorbidity between sleep disturbances and ADHD.

1. To understand the neurobiological and behavioral hypotheses explaining the comorbidity between sleep disturbances and ADHD.
2. To understand the interplay between medications and sleep disturbances in children with ADHD.
3. To understand the implications of the sleep disturbances associated with ADHD or manifesting as ADHD on daytime functioning.

Summary:

ADHD is a common, impairing and treatable neuropsychiatric disorder in children and adults, characterized by difficulties with self-regulation, disinhibition, cognitive impairment and hyperactivity. Sleep problems are reported in an estimated 25% to 50% of subjects with ADHD. Sleep problems in ADHD represent a significant source of stress for the child and family or the adult and may further worsen ADHD symptoms. Biochemically, both ADHD and sleep disturbances have been associated with neurotransmitters dysfunction, particularly those of the noradrenergic and dopaminergic systems. Because of the clinical and scientific relevance of sleep problems to the understanding and management of ADHD, there has been a dramatic increase in research interest in these areas in the last years. However, only a few studies have examined the importance of neurotransmitter actions in regulating sleep and sleepiness in children who have ADHD. Moreover, the mechanisms underlying the association between ADHD and sleep dysfunction, the impact of sleep disturbances on the daytime functioning of individuals with ADHD, and their clinical management are unclear. The symposium will provide the audience with a comprehensive overview of current literature on ADHD and sleep, and the results from recent studies that address these questions. The clinical and research implications will be highlighted.

3:30pm – 3:50pm

The relationship between sleep disturbances and ADHD: Methodological issues, mechanisms, clinical implications, and future directions of research

Samuele Cortese, MD, PhD (France)

3:50pm – 4:10pm

Sleep alterations associated with medications used to treat ADHD

Penny Corkum, PhD (Canada)

4:10pm – 4:30pm

An experimental investigation of the impact of sleep on the daytime functioning of children with ADHD and no comorbid sleep disorders

Reut Gruber, PhD (Canada) and Merrill Wise, MD (USA)

4:30pm – 4:50pm

Primary sleep disorders in children with ADHD

Barbara Fisher, PhD (USA)

TUESDAY, SEPTEMBER 13, 2011

3:30pm – 5:30pm **Technologists Workshops (206B)**

3:30pm – 4:30pm

Dental Effects of CPAP Masks

Fernanda Almeida, DDS, PhD (Canada)

4:30pm – 5:30pm

RLS, PLMS and Movement Disorders

Raffaele Ferri, MD (Italy)

5:00pm – 6:30pm **Parallel Symposia 18-20**

S18: Memory and Sleep (202)

Co-Chairs: Stuart Fogel, PhD (Canada) and Luigi Ferini-Strambini, MD (Italy)

Speakers: Luigi Ferini-Strambi, MD (Italy); Olga Prilipko, PhD (USA);
Émilie Fortier-Brochu, MPs (Canada); Stuart Fogel, PhD (Canada)

Objectives:

1. Present how different neuronal networks interact during a memory task, and the impairment seen in patient with OSA including impairment of vascular reactivity and local perfusion.
2. Illustrate the impact of treatment with nasal CPAP and slowness of recovery.
3. Describe the specific cognitive impairments associated with chronic insomnia and discuss their clinical significance.
4. Discuss age-related changes in sleep, the cerebral correlates of memory consolidation, and how these changes may adversely affect memory performance in older subjects.

Summary:

Cognitive dysfunction has been associated with different sleep disorders and different tools have been used to investigate these dysfunctions. In obstructive sleep apnea (OSA), impairment in several cognitive domains, including attention and vigilance decrements, memory gaps, and abnormalities in executive functions have been reported. These functional alterations are likely related to structural tissue damage and metabolic stress occurring in different brain tissue compartments and neural structures. Nasal CPAP and Sham CPAP have been used looking at baseline and post treatment response investigating cognitive function. Prilipko will present results of an fMRI study comparing OSA patients and controls. Also, investigation of vascular reactivity shows that compared to controls OSA patients have less cerebrovascular reserve and less perfusion compared to controls, with improved cerebral perfusion after two months with CPAP. Neuropsychological impairments in OSA patients are also associated with focal reductions of grey-matter volume in the left hippocampus (enthorinal cortex), left posterior parietal cortex and right superior frontal gyrus. Ferini-Strambi will describe how three months of CPAP treatment appears to be associated with significant improvements involving memory, attention and executive-functioning and be accompanied by grey-matter volume increases in hippocampal and frontal structures. The presentation by Fortier-Brochu will include a recent meta-analysis of neuropsychological performance in individuals with insomnia, which indicates that they perform significantly worse than normal sleepers on tasks assessing working memory, episodic memory and problem solving. The clinical significance of these findings will be discussed. Improved memory performance has been linked to certain electrophysiological signatures of sleep including the slow oscillation and sleep spindles. Slow wave activity and sleep spindles also change with age. Recent evidence suggesting that the age-related changes in the electrophysiological and hemodynamic correlates of sleep-dependent memory consolidation may contribute to age-related changes in memory will be discussed by Fogel.

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5:00pm – 6:30pm **S18: Memory and Sleep (202) (cont'd)**

5:00pm – 5:20pm

OSA, executive functions and memory and cerebral grey matter before and during CPAP

Luigi Ferini-strambi, MD (Italy)

5:20pm – 5:40pm

OSA, working memory, fMRI

Olga Prilipko MD, PhD (USA)

5:40pm – 6:00pm

Cognitive impairment in individuals with insomnia: Focus on clinical significance

Émilie Fortier-Brochu, MPs (Canada)

6:00pm – 6:20pm

Are age-related changes in memory a deficit in sleep-dependent memory consolidation?

Stuart Fogel, PhD (Canada)

TUESDAY, SEPTEMBER 13, 2011

5:00pm – 6:30pm

S19: Detecting and Scoring Sleep Disordered Breathing in Adults and Children: Is There a Need to Modify Criteria Again? (204AB)

Chairs: Hartmut Schneider, MD, PhD (USA)

Speakers: Hartmut Schneider, MD, PhD (USA); David Rapoport, MD (USA); Richard Berry, MD (USA); Jose Haba-Rubio, MD (Switzerland); Riccardo A. Stoohs, MD (USA)

Objectives:

1. Demonstrate the effects of improving technology on detection and defining sleep disordered breathing.
2. Show how the sleep disordered breathing rates are affected by the various different definitions of events.
3. Advance possible novel approaches to improve standards for detection and definition of sleep disordered breathing in clinical and research populations.

Summary:

The characterization of sleep disordered breathing patterns is based on discrete events such as apnea, hypopnea and respiratory effort related arousals. Arbitrary criteria are set for counting these episodes based on arousal and/or oxyhemoglobin desaturation. Methods for detecting breathing pattern during sleep have markedly improved over the last decade both in adult and pediatric sleep medicine and scoring rules have been modified to reflect some of the improvements in recording techniques. However, there is still considerable controversy of how to best record and score sleep disordered breathing episodes. In this symposium, the strengths and pitfalls of current recording and scoring techniques will be discussed in light of their potential for classifying sleep disordered breathing. Investigators will highlight how distinct approaches for detecting sleep-related disturbances compare. Each presentation will bring forward recommendations for how best to record and define sleep disordered breathing. Thus, the aim of this symposium is to understand the rationale of current definitions and how novel approaches may help to improve the detection and definition of sleep disordered breathing in clinical and research populations.

5:00pm – 5:15pm

Basic methodology for the assessment of respiration during sleep

Hartmut Schneider, MD, PhD (USA)

5:15pm – 5:30pm

Inspiratory flow limitation and sleep related breathing episodes in light of the Chicago criteria

David Rapoport, MD (USA)

5:30pm – 5:45pm

Sleep related breathing episodes in light of the AASM Criteria

Richard Berry, MD (USA)

5:45pm – 6:00pm

AASM vs. Chicago criteria for scoring events in a healthy population

Jose Haba-Rubio, MD (Switzerland)

6:00pm – 6:15pm

Approaches to respiratory characterization during sleep in children

Riccardo A. Stoohs, MD (USA)

TUESDAY, SEPTEMBER 13, 2011

5:00pm – 6:30pm

S20: How Can We Boost Access to Cognitive Behavioural Therapy for Insomnia? Practical Methods to Reach the Community and Primary Care Patients (206A)

Chair: Judith Davidson, PhD (Canada)

Speakers: Leanne Fleming, PhD (United Kingdom); Norah Vincent, PhD (Canada); Jack Edinger, PhD (USA); Judith Davidson, PhD (Canada)

Objectives:

1. To examine some novel, practical methods for enhancing access to CBT-I.
2. To consider the research results on these methods.
3. To realize the advantages and challenges of these methods.
4. To consider how we can build on promising methods.
5. To come up with ideas to increase access to CBT-I at your own site.

Summary:

This symposium will focus on practical methods, including opportunities and challenges, in making cognitive behavioural therapy for insomnia (CBT-I) more accessible. Access to CBT-I, the most efficacious treatment for chronic insomnia, is extremely limited for a variety of reasons. Insomnia researchers and clinicians need to discuss ideas, methods, and relevant research, for taking CBT-I from the lab to people-at-large. We will look at four approaches to increasing access to CBT-I. The speakers are from three different countries (United Kingdom, USA, Canada) and all have research and clinical experience in testing methods aimed at increased availability of CBT-I. Leanne Fleming will speak about nurse-delivered CBT in community health clinics in Scotland. Norah Vincent will speak about testing online provision of CBT to people with insomnia in the community. Jack Edinger will speak about making CBT-I “friendly” to primary care. Judith Davidson will speak about early intervention, including the use of group CBT-I, in a multidisciplinary primary care setting. There will be a discussion of the successes and challenges of these methods and ideas for building on them.

5:00pm – 5:20pm

Nurse delivered small group CBT for insomnia in community health clinics

Leanne Fleming, PhD (United Kingdom)

5:20pm – 5:40pm

Better sleep – just a mouse-click away: Delivering CBT-I through the internet

Norah Vincent, PhD (Canada)

5:40pm – 6:00pm

Making behavioral insomnia therapy friendly to the primary care environment

Jack Edinger, PhD (USA)

6:00pm – 6:20pm

Nipping it in the bud: Early intervention for insomnia in primary care

Judith Davidson, PhD (Canada)

TUESDAY, SEPTEMBER 13, 2011

- 6:30pm – 8:00pm **World Association of Sleep Medicine
Membership Meeting (206A)**
- 6:30pm – 8:00pm **Canadian Sleep Society
Annual General Meeting (206B)**
- 8:00pm – 11:00pm **Snooze Bowl (2000CD)**

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TUESDAY, SEPTEMBER 13, 2011

WEDNESDAY, SEPTEMBER 14, 2011

7:00am – 6:00pm **On-Site Registration**

8:00am – 9:00am **Keynote Lecture (2000AB)**

Insomnia, Therapy and Health Policies

Kevin Morgan, PhD.

Loughborough University, Leicestershire (United Kingdom)

9:00am – 10:30am **Parallel Symposia 21-23**

S21: Biomedical Innovation in Sleep Medicine (206B)

Chair: Ronald Chervin, MD (USA)

Speakers: Ronald Chervin, MD (USA); David White, MD (USA); Jed Black, MD (USA);
Matt Vaska, MS (USA)

Objectives:

1. Inspire sleep researchers and clinicians to consider opportunities for biomedical innovation that could accelerate improvement in diagnostic and therapeutic approaches to sleep disorders.
2. Raise awareness of academic, corporate, entrepreneurial, and collaborative mechanisms by which novel ideas can be generated, explored, developed, or translated into new products.
3. Stimulate clinicians to find appropriate partners, settings, and support that will enable innovative solutions to common, everyday challenges encountered in clinical practice of sleep medicine.

Summary:

Sleep medicine is inspired by a wide array of diagnostic and therapeutic approaches. The field relies on cutting-edge digital, technological, pharmacologic, prosthetic, and surgical advances from academia, industry, and academic-corporate collaborations. This unique symposium will explore opportunities through which sleep specialists can advance biomedical innovations that meaningfully improve sleep and alertness. Ronald Chervin, Director of the University of Michigan Sleep Disorders Center, will discuss emerging collaborations between sleep medicine specialists and engineers at academic institutions, where capstone senior projects, invention and development courses, medical innovation centers, and technology innovation fellowships can lead to imaginative or even disruptive technological advances. David White, Chief Medical Officer, Philips Respironics, will describe corporate strategies to invent and translate new concepts that shape clinical practice and its effectiveness. Jed Black will explain how the clinical and clinical trial experience of a sleep specialist can steer the pharmaceutical industry toward top neuroscience and clinical priorities. Matt Vaska, Founder and CEO of Apnicure, Inc., will illustrate how entrepreneurial ventures can advance completely novel therapeutic devices with the help of top talent and agile resources, outside traditional academic and large corporate environments.

WEDNESDAY, SEPTEMBER 14, 2011

9:00am – 10:30am **S21: Biomedical Innovation in Sleep Medicine (206B) (cont'd)**

9:00am – 9:20am

Opportunities for sleep biomedical innovation within the ivory tower

Ronald D. Chervin, MD (USA)

9:20am – 9:40am

Tomorrow's technology: Innovation within a corporate infrastructure

David P. White, MD (USA)

9:40am – 10:00am

Potential impact of sleep clinicians on directions pursued by large pharmaceuticals

Jed Black, MD (USA)

10:00am – 10:20am

Meeting the challenge of sleep disorders: Opportunities and pitfalls for the entrepreneur

Matt Vaska, MS (USA)

WEDNESDAY, SEPTEMBER 14, 2011

9:00am – 10:30am **S22: Epidemiology of Sleep Disorders (204AB)**

Chair: Maurice Ohayon, MD, PhD (USA)

Speakers: Yun Kwok Wing, MD (China); Mélanie LeBlanc, PhD (Canada); Seung Chul Hong, MD, PhD (Republic of Korea); Maurice Ohayon, MD, PhD (USA)

Objectives:

1. To understand the epidemiology of sleep disorders and their interactions with other diseases.
2. To identify potential moderating factors altering the trajectory of insomnia
3. To identify risk factors for sleep apnea and their impact on the prevalence of sleep apnea
4. Understand the impact and consequences of excessive sleepiness.

Summary:

The content of this symposium is highly relevant to the field of sleep medicine. The first presentation (YK Wing) will address the persistence and impact of insomnia on health using a 5-year longitudinal study conducted with Hong Kong Chinese children and their parents. The second presentation (M. LeBlanc) will summarize the current status of an ongoing longitudinal study of insomnia in Canada and present new data on moderators (e.g., treatment, life events) of its natural course over time. The third presentation (SC Hong) will focus on the epidemiology of sleep apnea in South Korea. More specifically, risk and protective factors will be addressed along with observed changes in the prevalence of sleep apnea and its risk factors over an eight-year period. The last presentation (MM Ohayon) will be centered on the epidemiology of excessive sleepiness both in terms of excessive quantity of sleep and deteriorated quality of wakefulness, how it interacts with sleep disorders, organic diseases and mental disorders.

9:00am – 9:20am

A 5 year longitudinal course and health impact of insomnia on Chinese children and their parents

Yun Kwok Wing, MD (China)

9:20am – 9:40am

Natural history of insomnia: Factors moderating the course of insomnia over time

Mélanie LeBlanc, PhD (Canada)

9:40am – 10:00am

Sleep Apnea Longitudinal Study on a 8-year Period in South Korea

Seung Chul Hong, MD, PhD (Republic of Korea)

10:00am – 10:20am

Prevalence and risk factors for excessive sleepiness in the US population

Maurice M. Ohayon, MD, PhD (USA)

WEDNESDAY, SEPTEMBER 14, 2011

9:00am – 10:30am **S23: Sleep-Wake Disturbances after Traumatic Brain Injury (206A)**

Chair: Nadia Gosselin, PhD (Canada)

Speakers: Simon Beaulieu-Bonneau, MPs (Canada); Samar Khoury, MSc (Canada); Michael Makley, MD (USA); Shanthakumar Rajaratnam, PhD (Australia); Philipp Valko, MD (USA)

Objectives:

1. Describe sleep, sleepiness and fatigue complaints after traumatic brain injury.
2. Understand the causes of sleep-wake disturbances in patients with traumatic brain injury.
3. Propose treatment for sleep-wake disturbances in this population.
4. Identify priorities in sleep and traumatic brain injury research.

Summary:

Traumatic brain injury (TBI) is a major public health concern in part because its incidence is estimated at more than 600/100 000 individuals, but also because it can result in long-term cognitive, physical, neurobehavioral and psychological impairments. Sleep-wake disturbances, particularly fatigue, hypersomnia, and insomnia, are among the most severe, the most persistent and the most disabling symptoms after TBI. They affect at least 50% of this population and are present across the range of TBI severity. However, whether post-traumatic sleep-wake disturbances improve or persist over time remains unclear. The cause of posttraumatic sleepiness is still elusive, but recent evidence suggests that it can possibly be explained by a complex interaction between brain lesions, neurotransmitter and hormonal changes, hypocretin level, aging, pain and genetic predispositions. Delayed or attenuated circadian rhythms may also cause sleep problems and vigilance decrements. Psychological factors such as anxiety, depression, and maladaptive habits are probably important contributors to the development and persistence of sleep-wake disturbances after TBI. A few therapeutic trials have been conducted on posttraumatic sleep-wake disturbances. Treatment with stimulants may be effective for sleepiness, but alleviation of fatigue and hypersomnia remains difficult to achieve.

In this symposium, the definition, diagnosis, epidemiology and general symptoms associated with TBI will be introduced. Subjective and objective measures of sleep disturbances and fatigue performed in early and chronic TBI patients will be reviewed. Physiological correlates of acute and chronic sleep-wake disturbances in TBI will be presented. Circadian rhythm dysfunctions observed after TBI as well as their impact on sleep quality and sleepiness will be discussed. Finally, treatment options, with an emphasis on pharmacological intervention, will be presented.

9:00am – 9:15am

Long-term sleepiness and fatigue symptoms following moderate/severe traumatic brain injury
Simon Beaulieu-Bonneau, MPs (Canada)

9:15am – 9:30am

Sleep and pain interaction in mild traumatic brain injury patients
Samar Khoury, MSc (Canada)

9:30am – 9:45am

Sleep in early brain injury recovery
Michael Makley, MD (USA)

9:45am – 10:00am

Sleep and circadian rhythm disruption associated with traumatic brain injury
Shanthakumar Rajaratnam, PhD (Australia)

10:00am – 10:15am

Posttraumatic sleep-wake disturbances: causes and treatment
Philipp Valko, MD (USA)

WEDNESDAY, SEPTEMBER 14, 2011

10:00am – 5:00pm **Exhibition (200ABC)**

10:30am – 11:00am **Coffee Break (200ABC)**

11:00am – 12:30pm **Technologists Workshops (French) (207)**

Oral appliances: introduction and indications in OSA treatment
(Orthèse dentaire: introduction et indications pour le traitement du SAS)
 Luc Gauthier, DMD, MSc (Canada)

11:00am – 12:30pm **Oral Paper Presentations (Sessions 10-13)**

O10: Sleep and Public Health (206A)

Co-Chairs: Torbjörn Akersdelt, PhD (Sweden) and Pierre Philip, MD, PhD (France)

11:00am - 11:15am

Teen sleep media exposures and physical activity: Results from the 2007 and 2009 youth risk behavior surveys

Caris Fitzgerald (USA)
 Erick Messias (USA), Daniel Buysse (USA)

11:15am - 11:30am

Night-work shifts and inflammatory markers

Khosro Sadeghniiat-Haghighi (Iran)
 Omid Aminian (Iran)

11:30am - 11:45am

Importance of the sleepiness and fatigue prevention for reducing occupational accidents in a Brazilian mining company

Felipe Vieira (Brazil)
 Sergio Barros (Brazil)

11:45am - 12:00pm

The Australian Centre for Education in Sleep (ACES), program: Sleep education trials for middle school students in Australia and New Zealand

Sarah Blunden (Australia)
 Geoff Kira (New Zealand), Michelle Hull (New Zealand), Ralph Maddison (New Zealand)

12:00pm - 12:15pm

Sleep duration does not predict major adverse cardiac events in the swedish national march cohort study

Anna Westerlund (Sweden)
 Rino Bellocco (Sweden), Madeleine Svensson (Sweden), Johan Sundström (Sweden),
 Torbjorn Akerstedt (Sweden), Ylva Trolle Lagerros (Sweden)

12:15pm - 12:30pm

Power naps in night time driving: First results of an investigation under natural conditions

Doris Moser (Austria)
 Gerhard Kloesch (Austria), Marion Seidenberger-Wutzl (Austria), John Dittami (Austria),
 Josef Zeitlhofer (Bahamas)

WEDNESDAY, SEPTEMBER 14, 2011

11:00am – 12:30pm **O11: Psychiatric and Neurological Disorders Affecting Sleep/Waking (204AB)**

Co-Chairs: Colin Shapiro, MD (Canada) and Yun-Kwok Wing, MD (China)

11:00am - 11:15am

Antiepileptic therapy in NFLE patients: Effects on macrostructural and microstructural PSG parameters

Fernando de Paolis (Italy)

Giulia Milioli (Italy), Andrea Grassi (Italy), Silvia Riccardi (Italy), Elena Colizzi (Italy),
Liborio Parrino (Italy), Mario Giovanni Terzano (Italy)

11:15am - 11:30am

Sleep and wake disorders associated with traumatic brain injury: Impact of successful management on recovery of cognition and communication

Catherine Wiseman-Hakes (Canada)

Angela Colantonio (Canada), Nora Cullen (Canada), Chanth Seyone (Canada),
Marc Narayansingh (Canada), Brian Murray (Canada)

11:30am - 11:45am

Quantitative EEG in REM sleep and NREM sleep in combat OEF/OIF veterans

Daniel Cohen (USA)

Jennifer Alman (USA), Amy Begley (USA), David Cashmere (USA), Jean Miewald (USA),
Anne Germain (USA)

11:45am - 12:00pm

Atypical topographical distribution and density of K-complexes: A possible cause of poor sleep in autism

Sabine Michaëlle Duplan (Canada)

Élyse Chevrier (Canada), Laurent Motttron (Canada), Roger Godbout (Canada)

12:00pm - 12:15pm

Insomnia and daytime sleepiness are risk factors for depressive symptoms in the elderly

Isabelle Jaussent (France)

Jean Bouyer (France), Marie-Laure Ancelin (France), Tasnime Akbaraly (France), Karine Pérès (France),
Karen Ritchie (France), Alain Besset (France), Yves Dauvilliers (France)

12:15pm - 12:30pm

Self-reported sleep problems and neuropsychological performance in ADHD

Barbara Fisher (USA)

Danielle Garges (USA), Stephany Fulda (Germany)

WEDNESDAY, SEPTEMBER 14, 2011

11:00am – 12:30pm **O12: Sleep Breathing Disorders (206B)**

Co-Chairs: Robert Skomro, MD (Canada) and Max Hirshkowitz (USA)

11:00am - 11:15am

New insights into monocyte differentiation in sleep apnea patients

Larissa Dyugovskaya (Israel)

Andrey Polyakov (Israel), Slava Berger (Israel), Peretz Lavie (Israel), Lena Lavie (Israel)

11:15am - 11:30am

Tumor growth and circulating VEGF induced by intermittent hypoxia in a mouse model of sleep apnea

Ramon Farre (Spain)

Isaac Almendros (Spain), Josep Montserrat (Spain), Marta Torres (Spain), Daniel Navajas (Spain)

11:30am - 11:45am

Sleep disordered breathing and cognition: The mediating role of weight

Karen Spruyt (USA)

David Gozal (USA)

11:45am - 12:00pm

Sleep breathing disorders at patients with acromegaly

Michail Agaltsov (Russian Federation)

Irena Ilovayskaya (Russian Federation), Irina Trigolova (Russian Federation),

Anna Vinogradova (Russian Federation), Svetlana Fedorova (Russian Federation),

Alexander Dreval (Russian Federation)

12:00pm - 12:15pm

Elevated pancreatic polypeptide (PP) levels in obstructive sleep apnea

Fanny Delebecque (USA)

Lisa Morselli (USA), Rachel Leproult (USA), Karla Temple (USA), Harry Whitmore (USA),

Jameese Sykes (USA), David Ehrmann (USA), Eve Van Cauter (USA)

12:15pm - 12:30pm

Obstructive sleep apnea and allergic rhinitis: Impact of treating upper airway inflammation on sleep parameters

Veronique-Isabelle Forest (Canada)

Basil Petrof (Canada), Najat Binotham (Canada), Qutayba Hamid (Canada), François Lavigne (Canada)

WEDNESDAY, SEPTEMBER 14, 2011

11:00am – 12:30pm

O13: Narcolepsy (202)

Co-Chairs: Ben Rusak, PhD (Canada) and Mehdi Tafti, PhD (Switzerland)

11:00am - 11:15am

Neural substrates of awakening probed with genetically targeted optical control of hypocretin neurons

Antoine Adamantidis (Canada)

11:15am - 11:30am

The effect of intranasal hypocretin-1 on glucose tolerance in normal weighted and obese narcolepsy patients

Sara Lena Weinhold (Germany)

Mareen Seeck-Hirschner (Germany), Alexander Nowak (Germany), Robert Gôder (Germany), Paul Christian Baier (Germany)

11:30am - 11:45am

Clinical differences between childhood and adulthood narcolepsy

Sona Nevsimalova (Czech Republic),

Jitka Buskova (Czech Republic), David Kemlink (Czech Republic), Iva Prihodova (Czech Republic), Jelena Skibova (Czech Republic), Karel Sonka (Czech Republic)

11:45am - 12:00pm

Executive functions in narcolepsy

Sophie BAYARD (France)

Valérie Decock Cochne (France), Muriel Croisier Langenier (France), Sabine Scholz (France), Yves Dauvilliers (France)

12:00pm - 12:15pm

Postprandial blood glucose concentrations are increased in patients with narcolepsy with cataplexy as compared with healthy controls

Paul C Baier (Germany)

Sarah L. Weinhold (Germany), Sarah Burkert (Germany), Mareen Seeck-Hirschner (Germany), Robert Gôder (Germany), Dunja Hinze-Selch (Germany), Manfred Hallschmid (Germany)

12:15pm - 12:30pm

Silent snoring, an enigma!

Vijaykrishnan Paramasivan (India)

WEDNESDAY, SEPTEMBER 14, 2011

12:30pm – 2:00pm **WASM/ESRS Symposium (206B)**

Neurogenic Hypersomnia

Co-Chairs: Christian Guilleminault, MD, PhD (USA) and Claudio Bassetti, MD (Switzerland)

Speakers: Claudio Bassetti, MD (Switzerland); Pierre-Hervé Luppi, PhD (France); Seiji Nishino, MD, PhD (USA); Maurice Ohayon, MD, PhD (USA)

Objectives:

1. Know the wide variation in neurophysiology and clinical presentation of the hypersomnias.
2. Understand the interaction of REM sleep regulation and their relation not only to the clinical features of narcolepsy, particularly cataplexy, but also REM behavior disorder, Parkinsonism and specific brain-stem lesions.
3. Know the significance of histaminergic system relation to some hypersomnias.
4. Know the prevalence of idiopathic hypersomnia in the general population obtained from a representative sample from European Community and the USA.

Summary:

Hypersomnia often presents one of the more challenging treatment problems in sleep medicine and it carries with it significant morbidity including health problems and risks of major accidents. The range of hypersomnia related to neurological factors varies from the well defined narcolepsy with cataplexy to the more mixed clinical patterns with difficulties staying awake during the day. The non-narcoleptic-idiopathic-hypersomnia are the most challenging diagnostic, etiogenic and therapeutic syndromes. Several classifications have been suggested based on clinical presentations. The clinical features seen in these disorders of excessive sleepiness mostly serve to identify the major types of hypersomnia and guide researches on their underlying neurophysiological impairments. The latest clinical subdivision based on clinical analyses and neurophysiological tests -including sleep related investigations- will be reviewed by Claudio Bassetti. Narcolepsy with cataplexy has been well defined but we are only now beginning to appreciate the REM sleep mechanisms and how they change to produce both cataplexy and REM behavior Disorder. New discoveries by Pierre-Hervé Luppi about REM-sleep regulation have changed our understanding of the pathological processes for these REM sleep related disorders. In addition many of the neurogenic hypersomnias show in human, indications of histaminergic abnormalities, with or without hypocretin deficiency that may account for the sleep-wake problems. Seiji Nishino will present current findings in this regard and discuss their overall significance. Idiopathic hypersomnia disorder has been seldom investigated in the general population. Maurice Ohayon will examine prevalence of Idiopathic hypersomnia in several European countries and the U.S. (sample n> 35,000 for about 750 millions people). In these studies excessive sleepiness was a frequent complaint with rates ranging from 12% to 28% depending on the country. Idiopathic hypersomnia prevalence ranged between 0.3% and 0.5%.

12:30pm – 12:50pm

Clinical spectrum and neurophysiology

Claudio Bassetti, MD (Switzerland)

12:50pm – 1:10pm

REM regulation in narcolepsy

Pierre-Hervé Luppi, PhD (France)

1:10pm – 1:30pm

Histamine in hypersomnias

Seiji Nishino, MD, PhD (USA)

1:30pm – 1:50pm

Epidemiology of idiopathic hypersomnia

Maurice Ohayon, MD, PhD (USA)

WEDNESDAY, SEPTEMBER 14, 2011

12:45pm – 1:45pm **Wayne Hening Memorial Lecture (206A)**

Motor Control and Dyscontrol in Sleep

Chair: Claudia Trenkwalder, MD (Germany)

Speaker: Sudhansu Chokroverty, MD
JFK New Jersey Neuroscience Institute, Edison (USA)

Objectives:

1. Review motor control of normal sleep.
2. Understand what happens when normal motor control breaks down.
3. Distinguish how to tell one jerk from another.
4. Understand role of multiple muscle recordings during overnight polysomnographic study.

Summary:

There is a progressive decrement of voluntary muscle tone in an orderly manner as one progresses from wakefulness to non-REM sleep stages 1 to 3 and REM sleep. Mild muscle hypotonia during NREM sleep results from a combination of disfacilitation of brainstem motor neurons and probably slight hyperpolarization of motor neurons. Marked suppression of voluntary muscle tone during REM sleep is caused by three fundamental mechanisms: inhibitory post-synaptic potentials causing hyperpolarization of motor neurons (major mechanism); disfacilitation of brainstem motor neurons; and decreased intracortical facilitation. Hypocretinergic neurons facilitate motor activity during wakefulness but are disfacilitated during sleep. When multiple checks and balances placed on multiple levels of motor pathways during sleep break down, strange and bizarre motor events may emerge causing abnormal jerks, shakes and screams during sleep. Failure of motor control in REM sleep may cause rapid eye movement behavior disorder, whereas a failure of motor control in NREM sleep may cause partial arousal disorders, periodic limb movements in sleep, hypnic jerks, propriospinal myoclonus, hypnagogic foot tremor, and alternating leg muscle activation. A failure of motor control in both NREM and REM sleep may result in rhythmic movement disorders, sleep bruxism, and catathrenia.

2:00pm – 3:00pm **Keynote Lecture (2000AB)**

Neural Regulation of Homeostatic Sleep Mechanisms

Barbara Jones, PhD
Montreal Neurological Institute and McGill University, Montreal (Canada)

3:00pm – 3:30pm **Coffee Break (200ABC)**

3:00pm – 5:00pm **Poster Presentations (see pages 109-123) (200ABC)**

WEDNESDAY, SEPTEMBER 14, 2011

3:30pm – 5:00pm

Parallel Symposia 24-26

S24: Access and Management of Obstructive Sleep Apnea (206A)

Chair: Najib Ayas, MD (Canada)

Speakers: Charles Atwood, MD (USA); Robert Skomro, MD (Canada); Frederic Séries, MD (Canada); Meir Kryger, MD (Canada, USA)

Objectives:

1. Discuss diagnostic algorithms for OSA.
2. Consider the role of portable monitoring and in-laboratory assessments for the diagnosis and treatment of OSA.
3. Evaluate therapeutic options for weight-loss in obese patients with OSA.
4. Be aware of the healthcare cost and the benefit of appropriate management of OSA.

Summary:

Obstructive Sleep Apnea (OSA) is associated with increased healthcare utilization, morbidity and mortality. Appropriate diagnosis and management of OSA varies depending on resources available. This symposium will address key areas regarding the diagnosis and management of patients with OSA. Atwood, who has been involved in a large randomized controlled trial of portable monitoring, will discuss the available scientific data comparing ambulatory monitoring to sleep laboratory monitoring in patients with suspected sleep apnea. The potential role of home-based diagnostic testing followed by home-based autoCPAP titrations (compared to in-laboratory polysomnography) will be addressed by Skomro, especially from a Canadian perspective. With a discussion on procedures for the appropriate use of home-based testing, particularly in areas with limited access to polysomnography. Obesity is a major risk factor for OSA and Séries will discuss how these patients should be chosen for specific weight loss therapies (e.g., lifestyle, medications, surgery). Untreated OSA leads to increased resource utilization in healthcare systems with reductions in healthcare utilization following compliance with therapy. Kryger will highlight the importance of earlier diagnosis and treatment of OSA.

3:30pm – 3:50pm

Portable monitoring for the diagnosis of OSA: A summary of recent randomized trials

Charles W. Atwood, Jr, MD (USA)

3:50pm – 4:10pm

The role of home-based diagnosis and treatment of OSA: A Canadian perspective

Robert Skomro, MD (Canada)

4:10pm – 4:30pm

Obesity, OSA and weight loss therapies

Frédéric Séries, MD (Canada)

4:30pm – 4:50pm

Healthcare utilization and benefits of improved awareness of OSA

Meir Kryger, MD (Canada, USA)

WEDNESDAY, SEPTEMBER 14, 2011

3:30pm – 5:00pm

S25: Shift Work – Update About Complaints, Tolerance, and Treatment (204AB)

Chair: Bjorn Bjorvatn, MD (Norway)

Speakers: Torbjörn Åkerstedt, PhD (Sweden); Bjorn Bjorvatn, MD (Norway); Lee Di Milia, PhD (Australia); Kenneth P. Wright Jr, PhD (USA)

Objectives:

1. Provide an update on sleep and sleepiness during shift work.
2. Discuss the prevalence and correlates of shift work disorder.
3. Provide an overview of individual differences in tolerance to shift work.
4. Present an update of the different treatment options for shift work related complaints.

Summary:

Shift work, and especially night work, disrupts the relationship between the body's internal clock and the environment, and is associated with shortened sleep, increased sleepiness, impaired performance and increased accident risk. The number of shift workers is increasing. About 20% of the workforce is engaged in shift work that includes night work. Society has changed towards a 24-hour society where time no longer sets limits for human activity. This symposium will provide new and updated data related to shift work. First, an overview and update on sleep and sleepiness during shift work will be given. Second, data about the newly defined diagnosis of Shift Work Disorder (SWD) will be presented. So far there are few studies on this disorder. Some people tolerate shift work well, whereas others develop serious problems. Such individual differences in tolerance to shift work will be addressed during the third lecture in the symposium. Treatment of shift work related complaints may involve the workers' sleep, sleepiness and/or circadian rhythm. The last lecture will provide an update on the treatment options for shift work related complaints. This symposium brings together speakers from three different continents and all are actively involved in shift work studies.

3:30pm – 3:50pm

Shift work, sleep and sleepiness

Torbjörn Åkerstedt, PhD (Sweden)

3:50pm – 4:10pm

Shift work disorder

Bjorn Bjorvatn, MD (Norway)

4:10pm – 4:30pm

Individual differences in tolerance to shift work

Lee Di Milia, PhD (Australia)

4:30pm – 4:50pm

Treatment of shift work related complaints

Kenneth P. Wright Jr., PhD (USA)

WEDNESDAY, SEPTEMBER 14, 2011

3:30pm – 5:00pm

S26: New Basic and Clinical Research Findings in Idiopathic RBD and Parkinsonian RBD (202)

Chair: Carlos Schenck, MD (USA)

Speakers: Pierre-Hervé Luppi, PhD (France); Jean-François Gagnon, PhD (Canada); Alex Iranzo, MD, PhD (Spain); Valérie Cochen De Cock, MD, PhD (France)

Objectives:

1. Identify the neuronal dysfunctions responsible for RBD.
2. Review the tests assessing cognitive deficits and the neuropsychological profile associated with mild cognitive impairment and dementia.
3. To learn new research findings on predictors of imminent risk for emergent parkinsonism in patients with idiopathic RBD.
4. To observe the improvement of the quality of movement during RBD vs. awake in patients with Parkinson's Disease and Multiple System Atrophy, and to explore its possible mechanisms.

Summary:

Research publications on idiopathic RBD (iRBD) and on RBD associated with parkinsonian disorders continue to grow at an accelerated rate, and so it is timely to share important new findings with sleep clinicians and researchers, and other interested clinicians. Luppi will present a current update on the neuronal network responsible for muscle atonia during REM sleep. Neurons generating REM sleep atonia are now known to be glutamatergic neurons localized in the pontine sublaterodorsal tegmental nucleus. Various scenarios will be presented that could be responsible for the induction of RBD. Luppi will first propose that RBD is due to the neurodegeneration of descending SLD neurons, and then introduce the notion that it could be due to neurodegeneration of glycinergic/GABAergic neurons hyperpolarizing motoneurons during REM sleep. Gagnon will review how poor performance on cognitive tests is well documented in RBD, and present data on how mild cognitive impairment (MCI) is a frequent feature of RBD, with a predominant attention/executive dysfunction. A comprehensive neuropsychological evaluation remains the “gold standard” to detect MCI in RBD. However, some screening tests, such as the Montreal Cognitive Assessment and Mattis Dementia Rating Scale, are valid to detect MCI in RBD. Moreover, a substantial number of patients with RBD develop dementia of the Lewy body dementia subtype. Iranzo will present data from recent published studies on predictors of imminent parkinsonism in idiopathic RBD. Cochen De Cock will present data from two recent published studies on how patients with RBD associated with Parkinson's Disease (PD) or Multiple System Atrophy (MSA) surprisingly demonstrate that the quality of their movements, speech and facial expression is improved during RBD compared to movements, speech and facial expression while awake. The underlying mechanism of this improvement remains unclear. A restoration of the dopaminergic loop could be involved in PD, but the fact that this improvement also exists in MSA where patients are levodopa-resistant suggests another mechanism.

WEDNESDAY, SEPTEMBER 14, 2011

- 3:30pm – 5:00pm S26: New Basic and Clinical Research Findings in Idiopathic RBD and Parkinsonian RBD (202) (cont'd)**
- 3:30pm – 3:50pm*
The neuronal network responsible paradoxical sleep and its dysfunctions causing REM sleep behavior disorder
 Pierre-Hervé Luppi, PhD (France)
- 3:50pm – 4:10pm*
Cognitive impairment in REM sleep behavior disorder
 Jean-François Gagnon, PhD (Canada)
- 4:10pm – 4:30pm*
RBD as the first manifestation of a neurodegenerative disease
 Alex Iranzo, MD, PhD (Spain)
- 4:30pm – 4:50pm*
The improvement of movement, speech and facial expression during REM Sleep Behaviour Disorder in Parkinson's Disease and Multiple System Atrophy
 Valérie Cochen De Cock, MD, PhD (France)
- 3:30pm – 5:30pm Technologists Workshops (206B)**
- 3:30pm – 4:30pm*
Cyclic Alternating Pattern - EEG
 Célyne Bastien, PhD (Canada)
- 4:30pm – 5:30pm*
Quality Assurance and Inter-Rater Reliability
 Reta Wright-Kinghorn, MA, RPSGT (Canada)
- 5:30pm – 6:00pm Closing Ceremony (2000AB)**
- 6:00pm – 7:00pm Farewell Social Event**

LIST OF POSTER PRESENTATIONS

Poster Numbering Guidelines - (example: M-A-001)			
1st letter = Presentation Day	2nd letter = Category		3rd Number = Poster Board Number
M=Monday T=Tuesday W=Wednesday	A: Aging and Developmental Issues B: Chronobiology/Circadian Disorder C: Excessive Daytime Sleepiness D: Insomnia E: Neurological Sleep Disorders Affecting Sleep/Waking F: Parasomnia G: Pharmacology	H: REM Behavior Disorders I: Sleep Breathing Disorders J: Sleep Deprivation K: Technology/Technical L: Restless Legs Syndrome (RLS) and Movement Disorders in Sleep M: Psychiatric Disorders Affecting Sleep/Waking N: Narcolepsy O: Other	ie: 001 / 002 / 003

M-A-001

A critical review of non-pharmacological sleep interventions for persons with dementia

Cary Brown (Canada)

Robyn Berry (Canada), Maria Tan (Canada),

M-A-002

A longitudinal evaluation of sleep duration and quality as a function of attachment style in children

Marie-Helene Pennestri (Canada)

Michael Meaney (Canada), Meir Steiner (Canada), Reut Gruber (Canada),

Klaus Minde (Canada), Ellen Moss (Canada), Leslie Atkinson (Canada), Helene Gaudreau (Canada),

M-A-003

A Longitudinal Study of Feeding Methods and Sleep Patterns among Chinese Infants in the First 4 Months of Life

Xiao-na Huang (China)

Hui-shan Wang (China), Xi-cheng Liu (China), Jing-xiong Jiang (China), Lin An (China),

M-A-004

Aging, Sleep Spindles and Declarative Memory

Carlyle Smith (Canada)

Kevin Peters (Canada), Laura Ray (Canada),

M-A-005

Associations between physical activity and sleep in young and older adults

Rébecca Robillard (Canada)

Naomi L. Rogers (Australia), Timothy Lambert (Australia), François Prince (Canada),

Julie Carrier (Canada),

M-A-006

Changes in the Duration of Slow (11 – 13.5Hz) and Fast (13.51 – 16Hz) Spindles in Adolescents

Rebecca Nader (Canada)

Carlyle Smith (Canada), Mark Sabbagh (Canada),

M-A-007

Child and Adolescent Sleep Checklist (CASC): Development and Validation of a Child Sleep Screening Questionnaire

Yasunori Oka (Japan)

Fumie Horiuchi (Japan),

M-A-008

Development of Sleep Patterns in Chinese Infants during the First 12 Months of Life

Xiao-na Huang (China)

Hui-shan Wang (China), Xi-cheng Liu (China), Jing-xiong Jiang (China), Lin An (China),

M-A-009

Effects of Hypnotics on Sleep and Vigilance in Elderly People

Marilyn Vigneault (Canada)

Isabelle Viens (Canada), Lisandre Danis (Canada), Alexandre Gagné-Deland (Canada),

Julien Fortier-Chicoine (Canada), Sarah Massicotte (Canada), Marie-Pier Normand (Canada), Tijana Ceklic (Canada),

Denis Bélisle (Canada), Dominique Lorrain (Canada),

M-A-010

How do Quebec parents organize their children's sleep and what meaning do they give to it?

Taís Araújo (Canada)

Évelyne Marquis-Pelletier (Canada), Stefanie Salazar-Delgadillo (Canada), Annie Vallières (Canada), Yvan Leanza (Canada),

M-A-011

Morning blood testosterone levels are associated with slow waves in middle-aged men

Zoran Sekerovic (Canada)

Catherine Lord (Canada), Julie Carrier (Canada),

M-A-012

Normative values of polysomnographic parameters in childhood

Sabine Schoelle (Germany)

M-A-013

Overestimation of children's sleep quality by mothers of insecure-avoidant children

Valerie Simard (Canada)

Marie-Ève Bélanger (Canada), Annie Bernier (Canada), Julie Carrier (Canada),

Jean Paquet (Canada),

M-A-014

Perception of sleep quality and severity of symptoms in the elderly population in Québec

Dominique Lorrain (Canada)

Sophie Desjardins (Canada), Marilyn Vigneault (Canada), Isabelle Viens (Canada),

Michel Prévile (Canada),

Denis Bélisle (Canada),

M-A-015

Risk factors influencing sleep quality in elderly patients with Diabetes Mellitus, Hypertension and Hyperlipidemia

Grace Chiang (Singapore)

Brenda Sim (Singapore),

M-A-016

Sleep Patterns and their Sociodemographic and Mental Health Correlates in a Nationally Representative Sample of U.S. Adolescents

Jihui Zhang (United States)

Jian-ping He (United States), Femke Lamers (United States),

M-A-017

Subjective and objective measures of sleep in healthy older adults

Laura Ray (Canada)

Carlyle Smith (Canada), Kevin Peters (Canada),

M-A-018

Where parents turn for help for preschool-age children with sleep problems

Graham J. Reid (Canada)

Moira A. Stewart (Canada), Evelyn R. Vingilis (Canada), David J.A. Dozois (Canada),

Stephen Wetmore (Canada), Gordon Dickie (Canada), John Jordan (Canada), Ted Osmun (Canada), Terrance J. Wade (Canada),

Judith Belle Brown (Canada), Gregory S. Zaric (Canada),

M-B-019

A typical case of asynchronization

Jun Kohyama (Japan)

M-B-020

Academic Motivation Plays a Key Role on Irregular Sleep Schedule in Senior High School Students during Long Vacation

Ya-Wen Jan (Taiwan)

Chien-Ming Yang (Taiwan),

M-B-021

Afternoon “nap zone” reflects the reversal of process-S by a light-sensitive circadian arousal system

Susanne Krupa (Canada)

M-B-022

Analysis of stress and chronotype for students, relation to day and night shift

Carla Andreoli (Brazil)

M-B-023

Armodafinil for the Treatment of Excessive Sleepiness Associated with Shift Work Disorder: Effect on Patient-Reported Functional Impairment, Treatment Satisfaction, and Quality of Life

Milton Erman (United States)

David Seiden (United States), Ronghua Yang (United States), Ryan Dammerman (United States),

M-B-024

Circadian variation of heart rate during different sleep stages

Philippe Boudreau (Canada)

Guy Dumont (Canada), Diane B. Boivin (Canada),

M-B-025

Circadian variation of plasma melatonin across the menstrual cycle in women with premenstrual dysphoric disorder

Ari Shechter (Canada)

Paul L'Espérance (Canada), N.M.K. Ng Ying Kin (Canada),

M-B-026

Correlation of Age and Mood Disorder Questionnaire (MDQ) Score with Morningness-eveningness Questionnaire (MEQ) Score in patients with Bipolar Disorder

Piyush Das (United States)

Rahul Kashyap (United States), Mark Frye (United States), Simon Kung (United States),

Timothy Lineberry (United States), Christine Galaray (United States), Kathleen Poppe (United States), Robert Auger (United States),

M-B-027

Does time of testing affect emotion perception?

Louise Beattie (United Kingdom)

Markus Bindemann (United Kingdom), Miriam Holm (United Kingdom), Nicola Forsberg (United Kingdom),
Stephany M. Biello (United Kingdom),

M-B-028

Excessive sleepiness and perceived health in shift workers

Annie Vallières (Canada)

Vincent Moreau (Canada), Mélanie LeBlanc (Canada), Charles M. Morin (Canada),

M-B-029

Excessive time spent in bed and irregular sleep pattern in shift work sleep disorder sufferers and good sleepers.

Delphine Saey (Canada)

Emmanuelle Bastille-Denis (Canada), Annie Vallières (Canada),

M-B-030

Factors Associated with Difficulty in Readjustment of Sleep-Wake Schedule after Long-Vacation in College Students

Chih-Ying Hung (Taiwan)

Ya-Wen Jan (Taiwan), Chien-Ming Yang (Taiwan),

M-B-031

Influence of nap opportunity timing on heart rate variability

Philippe Boudreau (Canada)

Guy Dumont (Canada), Diane B Boivin (Canada),

M-B-032

Morningness-eveningness and menstrual distress mediating the effects of shift pattern on sleep hygiene practice

Min-hurey Chung (Taiwan)

M-B-033

Preserved circadian rhythm despite of D2 antagonist raclopride-related motor activity shifts

Walter Paulus (Germany)

Florian Klinker (Germany), Kenan Hasan (Germany), Michael A Nitsche (Germany),

David Liebetanz (Germany),

M-B-034

Sex differences in the circadian variation of body temperature

Wei Hsien Yeh (Canada)

Ari Shechter (Canada), Philippe Boudreau (Canada), Diane Boivin (Canada),

M-B-035

Sleep in MT2 melatonin receptor knockout mice

Rafael Ochoa-Sanchez (Canada)

Stefano Comai (Canada), Gabriella Gobbi (Canada),

M-B-036

Sleep-wake schedules and subjective sleep quality of Georgian university students

Lia Maisuradze (Georgia)

Nani Lortkipanidze (Georgia), Nikoloz Oniani (Georgia),

M-B-037

Study of circadian variability of body temperature and sleep-wake cycle of the student night shift workers

Luciane Ferreira (Brazil)

M-B-038

Study of memory, attention and sleep-wake cycle of the nursing staff in different work shifts

Beatriz De Oliveira (Brazil)

Milva Maria Figueiredo De Martino (Brazil),

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Study of variability circadian body temperature and sleep-wake cycle of the student night shift workers

Luciane Carmona (Brazil)

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Subjective sleep quality (SSQ) and sleep habits (SH) in patients with delayed sleep phase disorder

Ulises Jimenez (Mexico)

Irma Hernandez (Mexico), Alberto Labra (Mexico), Selene Verde (Mexico), Reyes Haro (Mexico),

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The association of sleepiness and diurnal preference with salivary amylase activity

Maria Gardani (United Kingdom)

Christopher Miller (United Kingdom), Jason Ellis (United Kingdom), Malcolm Von Schantz (United Kingdom),

Simon Archer (United Kingdom),

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The Effect of Armodafinil on Late-in-Shift Clinical Condition and Excessive Sleepiness as Well as Overall Daily Functioning in Patients with Shift Work Disorder: A Randomized, Double-blind, Placebo-Controlled Study

Milton Erman (United States)

David Seiden (United States), Ronghua Yang (United States), Ryan Dammerman (United States),

M-B-043

The “forbidden zone for sleep” might be caused by the evening thyrotropin surge and its biological purpose is to enhance survival: a hypothesis

Jose Carlos Pereira Jr (Brazil)

Rosana Cardoso Alves (Brazil),

M-B-044

The Prevalence and Patterns of Sleep Disorders and Circadian Rhythm Disruptions in Children and Adolescents with Fetal Alcohol Spectrum Disorders (FASD)

Shery Goril (Canada)

Colin Shapiro (Canada),

M-C-045

Comparative Utility of New Pictorial Epworth Sleepiness Scale (ESS) Questionnaire and Traditional Worded ESS Questionnaire

Siti Raudha Senin (Singapore)

Shuhui Xu (Singapore), Thun How Ong (Singapore), Nancy Lew (Singapore),

M-C-046

Kleine-Levin syndrome: A 18F-FDG PET/CTstudy

Haba-Rubio Jose (Switzerland)

John O. Prior (Switzerland), Eric Guedj (France),

M-C-047

Levels of sleepiness and sleep patterns of night nursing student worker

Luciane Carmona (Brazil)

Milva De Martino (Brazil),

M-C-048

Sleep and waking patterns in professional drivers in Chile

Walter Avdaloff (Chile)

M-E-049

Agrypnia Excitata: Polysomnographic findings in Limbic Autoimmune Encephalopathy (LAE) and Fatal Familial Insomnia (FFI).

Arturo Garay (Argentina)

Susana Blanco (Argentina), Diego Castro (Argentina), Paola Fassano (Argentina),

Rivero Alberto (Argentina),

M-E-050

Analyses of sleep characteristics in Post-Polio Syndrome Patients

Gustavo Antonio Moreira (Brazil)

Tatiana Mesquita e Silva (Brazil), Marcia Pradella-Hallinan (Brazil), Abrahao Augusto Juviano Quadros (Brazil),

Acary Souza Bulle Oliveira (Brazil),

M-E-051

Childhood epilepsy!....What about your child's sleep?

Al de Weerd (Netherlands)

Yvette Geerts (Netherlands),

M-E-052

Effect of gabapentin on sleep patterns in a patient with nocturnal epilepsy

Fructuoso Ayala-Guerrero (Mexico)

M-E-053

Effects of transdermal rotigotine on sleep and nocturnal symptoms over a 1-year period in Parkinson's disease: an open-label extension of the RECOVER study

Claudia Trenkwalder (Germany)

Marco Zucconi (Italy), Eduardo Tolosa (Spain), Joseph H. Friedman (United States),

Erwin Surmann (Germany), John Whitesides (United States), Babak Boroojerdi (Germany), K Ray Chaudhuri (United Kingdom),

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Evidence that postsynaptic NMDA receptors underlie enhanced excitability of thalamic neurons during EEG sowing following tetanic stimulation of the sciatic nerve

Peter Soja (Canada)

Niwat Taepavarupruk (Canada), Raul Sanoja (Canada), Elke Huber (Canada),

M-E-055

Sleep Investigation of Teenagers (13-18 years old).

Fatiha Bradai (Algeria)

Abderrazak Baba Ahmed (Algeria), Reda Baghdad (Algeria), Zahia Ardjoun (Algeria), Souad Boukhris (Algeria),

M-E-056

Sleep slow waves in Parkinson's disease

Véronique Latreille (Canada)

Julie Carrier (Canada), Marjolaine Lafortune (Canada), Jacques Montplaisir (Canada), Ronald Postuma (Canada), Jean-François Gagnon (Canada),

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The impact of a deficiency of sleep on the type 2 diabetes.

Fatiha Bradai (Algeria)

Abderrazak Baba Ahmed (Algeria), Senouci Bradai (Algeria), Abdelkader Boudjemaa (Algeria), Fatima Benchohra (Algeria), Soumia Selouani (Algeria),

M-E-058

What do we know about pediatric sleep post traumatic brain injury? A systematic review of the literature identifies gaps in research and knowledge.

Yair sadaka (Canada)

Ryan Hung (Canada), Tamsin Adams-Webber (Canada), Shelly Weiss (Canada),

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What is causing sleep problem? Restless Legs Syndrome Or Benign Muscle Cramps!

Abdul qayyum Rana (Canada)

M-F-060

Cerebral dysfunctions in rapid eye movement sleep behaviour disorder: an event-related potential study

Pierre-Olivier Gaudreault (Canada)

Jacques Y. Montplaisir (Canada), Jean-François Gagnon (Canada), Mélanie Vendette (Canada), Nadia Gosselin (Canada),

M-F-061

Children difficult temperament, mothers' depression and nightmares: A MAVAN study

Andrée-Anne Bouvette-Turcot (Canada)

Marie-Hélène Pennestri (Canada), Michael Meaney (Canada), Alison Fleming (Canada), Meir Steiner (Canada), John Lydon (Canada), Reut Gruber (Canada), Klaus Minde (Canada), Lestlie Atkinson (Canada), Ashley Wazana (Canada), Hélène Gaudreau (Canada),

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Frequency of Parasomnias in Patients with Non-Epileptic Seizures

Mitchell Miglis (United States)

Michael Boffa (United States), Alcibiades Rodriguez (United States), Anuradha Singh (United States),

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Sleep related violence – a case report of a NREM parasomnia triggered by fever

Colin Shapiro (Canada)

Miqdad Bohra (Canada),

M-F-064

Sleep Texting: A new variation on an old theme

Sandra Horowitz (United States)

M-F-065

Temporal relationship between EEG arousal, bruxism and nocturnal groaning (catathrenia)

Hisae Muraki (Japan)

Mutsumi Okura (Japan), Rie Imai (Japan), Manami Tanaka (Japan), Hideko Sugita (Japan), Etsuko Takeda (Japan), Takafumi Kato (Japan), Mitsutaka Taniguchi (Japan),

M-F-066

The Application of Polysomnographic Recording in NonREM Parasomnias: Implications for Research and Clinical Understanding

Tatyana Mollayeva (Canada)

M-F-067

The effect of hypnotherapy on spectral power in sleepwalkers

Pauline Brayet (Canada)

Régine Denesle (Canada), Sylvie Rompré (Canada), Dominique Petit (Canada), Jacques Montplaisir (Canada),

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The Treatment of Sleepwalking with Hypnosis

William C. Kohler (United States)

M-F-069

Shaken but not stirred – evidence towards the ongoing debate of triggers for NREM parasomnias

Shawn Vasdev (Canada)

Miqdad Bohra (Canada), Colin Shapiro (Canada),

M-G-070

Age and Caffeine Habitual Consumption Patterns Modulate the Effects of Caffeine on Sleep

Caroline Reinhardt (Canada)

Rébecca Robillard (Canada), Frédéric Lupien (Canada), Ariane Jacob-Lessard (Canada),

Julie Carrier (Canada),

M-G-071

Formalin-Induced Theta Wave EEG Activity: Resistance to Classical Anesthetics

Elke Huber (Canada)

Raul Sanoja (Canada), Peter Soja (Canada),

M-G-072

The prevalence and nature of stopped on-the-road driving tests and the relationship with objective performance impairment (SDLP)

Joris Verster (Netherlands)

M-G-073

Xylaria Nigripes Wuling mitigates spatial memory impairment induced by rapid eye movement sleep deprivation in the rat

zhengqing zhao (China)

yanpeng li (China), zhongxin zhao (China),

M-H-074

Tonic and phasic muscle activity in REM sleep behavior disorder

Mutsumi Okura (Japan)

Hideko Sugita (Japan), Yoko Fujii (Japan), Noriko Yasumuro (Japan), Mitsutaka Taniguchi (Japan), Motoharu Ohi (Japan),

M-H-075

Cognitive Performance and Mild Cognitive Impairment in REM Sleep Behaviour Disorder

Daphné Génier Marchand (Canada)

Jacques Montplaisir (Canada), Josie-Anne Bertrand (Canada), Ronald B. Postuma (Canada),

Jean-François Gagnon (Canada),

M-H-076

Discordance between dopamine transporter deficit and motor symptoms in a case of REM behaviour disorder

Monica Puligheddu (Italy)

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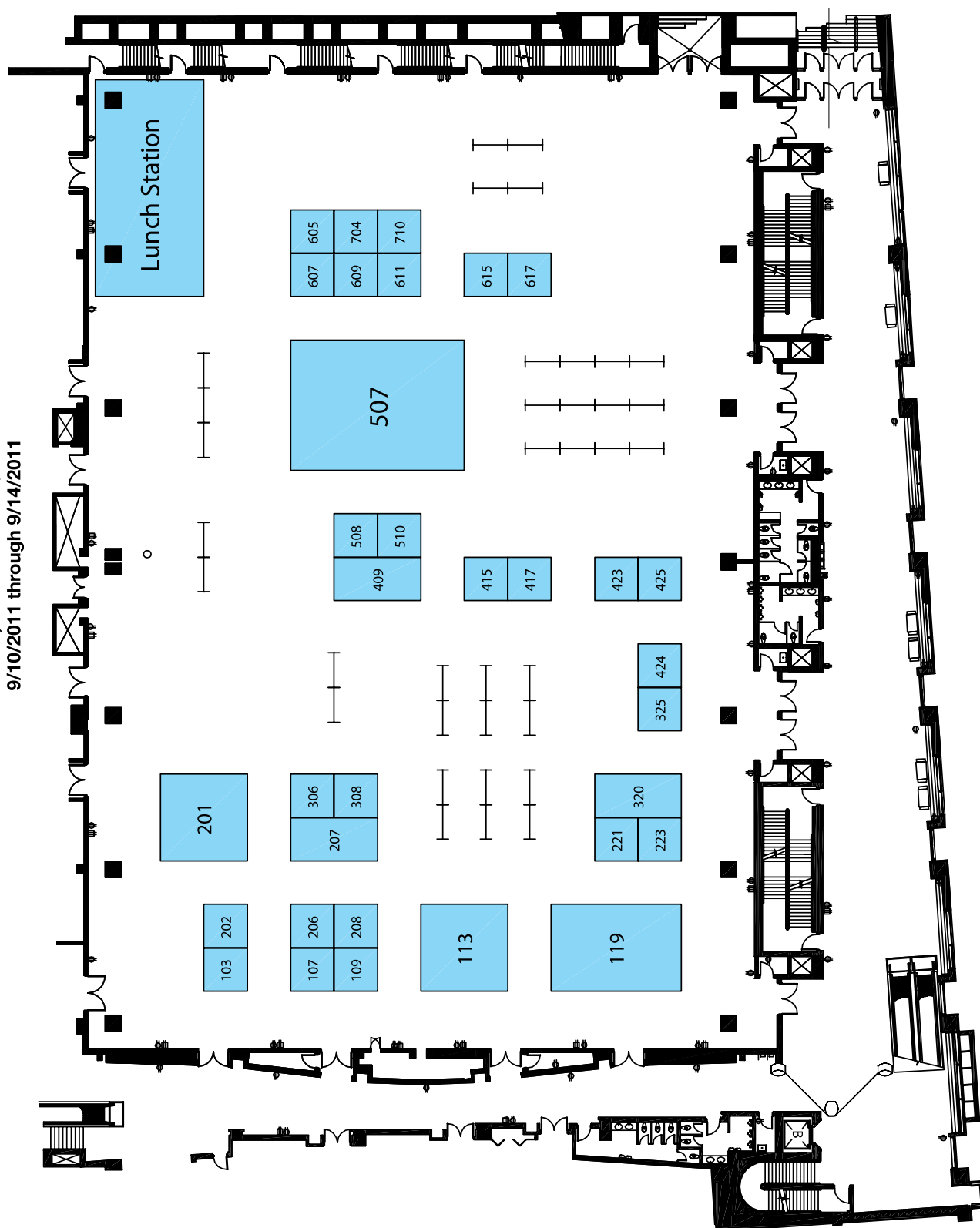
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Fisher & Paykel entered the respiratory care market in 1971 with the development of a unique respiratory humidifier system for use in critical care. We now offer a broad range of products and systems for use in respiratory and acute care and the treatment of obstructive sleep apnea (OSA).

Fondation Sommeil (Booth #609)

Fondation Sommeil est un organisme à but non lucratif (OBNL) dont la mission est d'écouter, d'informer et d'aider la personne atteinte d'un trouble du sommeil ainsi que de sensibiliser sa famille, ses amis et le grand public à la problématique du sommeil. Elle accompagne le malade non encore diagnostiqué dans l'identification des signes de troubles potentiels afin qu'il constate son problème médical et demande l'aide appropriée. Elle les incite, par ailleurs, à prendre en charge une nouvelle façon de vivre leur sommeil.

En plus d'être un groupe d'entraide, Fondation Sommeil, association de personnes, développe un centre de référence sur la vigilance et les pathologies du sommeil. Elle travaille avec enthousiasme à ce que le sommeil devienne une spécialité médicale. www.fondationsommeil.com

Grass Technologies, An Astro-Med Inc. Subsidiary (Booth #605)

600 East Greenwich Avenue
West Warwick, RI 02893
phone: 401-828-4000
fax: 401-822-2430
email: grass@astromed.com
www.grasstechnologies.com

Grass Technologies offers a wide range of instrumentation for PSG, EEG — from lab-based to ambulatory to WIRELESS recorders — at affordable prices. Systems feature the world-renowned accuracy, dependability and performance of Grass amplifiers, and powerful software. A full line of electrodes, transducers, etc. is also available — visit our Online Store.

KEGO Corporation (Booth #415)

KEGO Corporation is dedicated to meeting the needs of sleep labs and respiratory providers. Our large selection of sleep disorder testing and respiratory supplies makes one stop shopping a breeze. At KEGO we work hard to earn your business. Order online at www.kegocorp.com or call toll free 1-866-862-7328

The Lung Association – The Canadian Respiratory Health Professionals

The CRHP is the allied health professionals section of The Lung Association, representing health professionals from a wide variety of disciplines working collaboratively in the respiratory health field.

There are many great reasons to join the CRHP:

- Eligibility to apply for CRHP Research Grants and Fellowships
- Eligibility to apply for CRHP Regional Funding grants
- Reduced registration fee for Canadian Respiratory Conference 2012 (Vancouver, BC, April 26 – 28)
- Membership publications: an online subscription to the Canadian Respiratory Journal, quarterly CRHP newsletter: Airwaves, and monthly electronic bulletin
- Leadership opportunities to serve on the CRHP Leadership Council and/or to participate in working groups and subcommittees

For more information about CRHP initiatives, please visit www.lung.ca/crhp

Medigas (Booth #207 & 209)

Medigas is a trusted name in CPAP therapy, being one of the first homecare providers to bring CPAP technology to the Canadian healthcare market. Over the years, we've learned how to make CPAP therapy a positive experience by developing programs that place our clients in the centre of the services and products we provide. Across Canada, Medigas has locations designed specifically for our CPAP therapy clients, showcasing the latest in CPAP systems and accessories from leading manufacturers. From sleep screening to CPAP therapy, you can rely on Medigas to help improve the quality of sleep for individuals with sleep apnea.

La réputation de Medigas en matière de thérapie CPAP est solidement établie. Première à offrir cette technologie sur le marché des soins à domicile au Canada, Medigas a amélioré son programme de traitement des troubles du sommeil en centrant son offre de produits et services sur l'expérience positive qu'ils doivent apporter à l'utilisateur. Partout au pays, Medigas dispose d'établissements spécialisés, où elle propose à ses clients des appareils et accessoires CPAP de pointe, provenant des plus grands fabricants. Du dépistage des troubles du sommeil jusqu'au traitement CPAP, les personnes atteintes d'apnée du sommeil peuvent compter sur Medigas pour mieux dormir.

MedSleep (Booth #325)

MedSleep's network of clinics are committed to providing the highest quality sleep medicine services for both individuals and corporations across Canada. MedSleep is dedicated to improving health and promoting wellness by providing a comprehensive and patient-centered approach to the diagnosis and treatment of sleep disorders. Our Physicians, Respiratory Therapists, RPSGT's and support staff have extensive expertise and experience in the field of sleep disorders medicine. We strive to be pioneers in sleep medicine utilizing the latest in technology, promoting education, and participating in clinical research for the advancement of new treatments.

Natus (Booth #424)

Natus is a leading provider of healthcare products used for the screening, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, sleep disorders, and balance and mobility disorders.

Product offerings include computerized neurodiagnostic systems for audiology, neurology, polysomnography, and neonatology, as well as newborn care products such as hearing screening systems, phototherapy devices for the treatment of newborn jaundice, head-cooling products for the treatment of brain injury in newborns, and software systems for managing and tracking disorders and diseases for public health laboratories. For more information please visit us at www.natus.com.

Northern Light Technologies (NLT) (Booth #510)

Northern Light Technologies (NLT) produces the portable TRAVELITE, SADELITE Desk Lamp, FLAMINGO Floor Lamp, BOXELITE, ceiling track-mounted SHOWOFF and the New LUXOR table lamp, all 10,000 LUX light sources. Our products are manufactured in North America, backed by a 7-year Warranty and preferred by thousands of healthcare professionals who treat for Sleep Phase Disorders, Jet-Lag and Seasonal Affective Disorders (SAD). NLT is the supplier of choice for affordable, versatile, power and adjustable Bright Light Sources. Our lights are UV-Clean, Flicker-Free, avoid the PHOTO-TOXICITY associated with BLUE LIGHT and operate on 110V and 220V current. Reach us at 1-800-263-0066 or www.northernlighttechnologies.com

OSR Medical (Booth #109)

The Leader in Sleep Medicine

Founded in Montreal in 1998, OSR Medical is headquartered in Quebec and provides healthcare services in the field of sleep medicine and sleep disorders. Our services are offered both in the clinical setting and in your home. We are an accredited service supplier to several health centers in Quebec.

Since 2007, our Sleep Disorders Centre is accredited by the American Academy of Sleep Medicine (AASM), as an 'Accredited Member Center'. We are the first Centre in Canada to obtain this status.

Since 2002, OSR Médical is an accredited member of Accreditation Canada

Panthera Dental (Booth #202)

Panthera Dental is a Canadian company specialized in dental industry. They offer the world first cad-cam orthosis for sleep apnea and snoring.

Philips Respironics (Booth #507)

Philips Respironics, a global leader in the sleep and respiratory markets, is passionate about improving the quality of people's lives with solutions designed around the needs of customers and patients. That's why we align with caregivers to establish healthier living and healthier practices. Philips Respironics first considers the needs of our customers, their patients and caregivers and then introduces simpler and more intuitive innovations that consistently revolutionize the areas of sleep, oxygen therapy, ventilation and respiratory drug delivery. As a result, Philips Respironics is recognized worldwide as a pace-setter and as a valuable ally in better sleep and breathing.

Research Pharmaceutical Services (Booth #423)

RPS, The Next Generation CRO, provides comprehensive global Phase II-IV clinical development solutions to the pharmaceutical, biotechnology and medical device industries. By combining an experienced clinical research operations infrastructure with the industry's largest resourcing engines, RPS is uniquely positioned to offer our Customers a broad spectrum of outsourcing solutions. These solutions range from globally embedded functional and cross-functional programs to enhanced global full-service solutions, and are powered by highly experienced project teams providing innovative, seamless, cost-effective and high quality services.

ResMed Corp (Booth #409 & 411)

9001 SPECTRUM CENTER BLVD. San Diego, CA 92123

Contact: Customer Service

Phone: 800.424.0737 • Fax: 858.836.5552 • E-mail: reception@resmed.com • Internet: www.resmed.com

ResMed is a global leader in medical equipment for the screening, treatment, and management of sleep-disordered breathing and other respiratory disorders. Our product line includes automatic positive airway pressure devices, bilevel devices, continuous positive airway pressure devices, nasal pillows systems, nasal mask systems, full face mask systems, humidifiers, and software/clinical systems.

The Restless Legs Syndrome (RLS) Foundation (Booth #206)

The Restless Legs Syndrome (RLS) Foundation is a non-profit patient organization incorporated since 1992 providing the latest information about RLS. The goals of the Foundation are to increase awareness, improve treatments, and through research, find a cure for RLS -- a neurological condition severely affecting millions of individuals.

The European Alliance for Restless Legs Syndrome (EARLS)

The European Alliance for Restless Legs Syndrome (EARLS) is an independent non-profit alliance of national patient organizations from Belgium, Finland, Norway, Spain, Sweden, The Netherlands and The UK. EARLS focuses on: better and quicker diagnosis, treatments, improving quality of life, increasing public and medical understanding, scientific research and eliminating prejudice of RLS.

Sentec AG, by Master Distributor Bemes, Inc. (Booth #417)

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The Sentec Monitor provides ACCURATE, continuous, non-invasive real time monitoring of patient Arterial CO₂, Oxygen Saturation and Heart Rate utilizing the "V-Sign Sensor", the world's only DIGITAL Transcutaneous sensor. Through accurate real time monitoring and patient trend memory, we can better assess patient ventilation and oxygenation in the ICU as well as monitor patient arterial values in virtually any procedural setting or Sleep Lab. For use with all patients, including Neonatal applications!

Shoppers Home Health Care (Booth #221)

Owned by Shoppers Drug Mart, the largest retail pharmacy chain in Canada, Shoppers Home Health Care has a unique advantage, as we can utilize our pharmacist's network and our more than 50 retail locations to reach undiagnosed OSA patients.

Our highly skilled base of sleep consultants are focused on improving health outcomes for those clients living with OSA. This is accomplished by educating clients on their condition, understanding the role of their equipment and receiving ongoing service to maximize their compliance.

Come see us at booth 221 to find out how Shoppers Home Health Care can work with you to maximize client outcomes.

SleepMultiMedia (Booth #306)

SleepMultiMedia version 7.0, a computerized textbook of sleep medicine, covers sleep methodology, sleep research, sleep physiology, and clinical sleep medicine. The program covers more than 5,000 Medline references and abstracts, 20 chapters, 127 category 1 CME credits, extensive information on polysomnography, and an updated Policy and Procedure Manual for sleep center staff and technicians. SleepMultiMedia version 7.5 will be available in the Fall.

Tel: 914 722-9291 Fax: 914 722-4490 Website: www.sleepmultimedia.com

Sleep Strategies Inc. (Booth #710)

Sleep Strategies is a leading provider of professional sleep scoring and training services for sleep disorder facilities worldwide. Established to meet the increasing demands from the rapidly evolving sleep medicine industry, Sleep Strategies is the foremost scoring service for timely, accurate and affordable sleep analysis. Sleep Strategies' plays a key role in the successful growth of leading hospitals and private sleep disorder laboratories which is achieved through our ongoing commitment to superior quality, affordability and exceeding our customer's expectations. For more information on Sleep Strategies, please visit the company web page at www.sleepstrategies.com.

Sleepvirtual (Booth #308)

Sleepvirtual's mission is to provide high quality cost efficient medical equipment in order to help make the diagnostic and treatment of Sleep Disorders Universal to all patients around the world.

Come visit us at booth #308 to check the newest PSG solutions available for your Sleep Lab.

Société de l'assurance automobile du Québec (Booth #607)

La Société de l'assurance automobile du Québec a pour mission de protéger et d'assurer la personne contre les risques liés à l'usage de la route. À ces fins, entre autres mandats, elle mène des activités de promotion de la sécurité routière et de prévention.

The mission of the Société de l'assurance automobile du Québec is to protect and insure individuals against the risk of road accidents. As part of its mandate, it conducts prevention and road safety promotion activities.

SOMNOmedics (Booth #425)

SOMNOmedics is a globally acting company with dealers and customers in more than 40 countries worldwide that supplies you with powerful and innovative solutions for Sleep Diagnostics. To do so, we use latest medical discoveries and technological developments. Besides, our solutions are easy to apply, reliable in their results and durable during the daily routine.

Our light-weight SOMNOscreen is the smallest fully portable PSG System available. It can be used from a Screener to a full PSG System, is upgradeable at any time and is compatible with both, IN LAB diagnostics and HOME SLEEP testing. Our SOMNOWatch is perfect for any kind of Actigraphy Measurements.

Strong Dental (Booth #617)

Strong Dental is divided into three divisions: Oral Sleep Appliances, Bruxism/TMJ Splints, and Orthodontic Appliances. We are a quality-oriented dental laboratory, specializing in the manufacturing and distribution of premium, effective oral appliances across North America. Our signature dental sleep appliance line includes The SUAD™ Device, The SUAD™ Elite, The Transitional SUAD™ Appliance (TSA), and the Morning Repositioner. We also fabricate numerous types of bruxism/TMJ splints, including the Strong Splint. Our premium appliances are embedded with Strong Dental's patented casted framework, which is designed to increase the strength and longevity of the device while helping prevent actual tooth movement and eliminating all clasps.

UCB

UCB, Brussels, Belgium (www.ucb.com) is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the central nervous system and the immune system. UCB employs more than 8 500 people across about 40 countries and is listed on Euronext Brussels (symbol: UCB).

VitalAire (Booth #508)

With over 80 offices across Canada and 150 healthcare professionals coast to coast, VitalAire is a leader in Home Oxygen Services, Sleep Apnea Programs and Obstructive Sleep Apnea Treatment across Canada.

World Association of Sleep Medicine (Booth #201)

The fundamental mission of the WASM is to advance sleep health worldwide. WASM will fulfill this mission by promoting and encouraging education, research and patient care throughout the World, particularly in those parts of the world where the practice of sleep medicine is less developed. WASM will act as a bridge between different sleep societies and cultures, supporting and encouraging worldwide exchange of clinical information and scientific studies related to sleep medicine. WASM will seek to encourage development and exchange of information for world-wide and regional standards of practice for sleep medicine.

XenoPort

XenoPort is a biopharmaceutical company focused on developing and commercializing a portfolio of internally discovered product candidates. In April 2011, XenoPort's first product was approved in the US for the treatment of moderate-to-severe primary restless legs syndrome in adults. XenoPort is focused on development of product candidates for the potential treatment of central nervous system (CNS) disorders, including neuropathic pain, spasticity and Parkinson's disease.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Mort de fatigue.

Au Québec, la fatigue au volant est responsable de 135 décès en moyenne par année.

Les troubles du sommeil ont un effet sur la conduite d'un véhicule.

Par exemple, un conducteur qui souffre d'apnée du sommeil non traitée est sept fois plus à risque d'avoir un accident de la route.

Professionnels de la santé : c'est votre responsabilité de déclarer à la Société tout patient qui souffre d'un trouble du sommeil non traité et qui représente un risque pour la sécurité routière.

Pour plus d'information sur la fatigue au volant :
www.saaq.gouv.qc.ca, à la rubrique « Sécurité routière ».

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5th World Congress on Sleep Medicine

Sleep, Health, and Society

Save the Date!

*Sept 28-Oct 2, 2013
Valencia, Spain*



Las Arenas Resort and Valencia Beach

The World Association of Sleep Medicine (WASM) and the Spanish Sleep Society (SES) invite you to our joint congress in Valencia, Spain, from September 28-October 2, 2013. The congress is a world forum inviting professionals to advance current thinking, improve sleep health, and encourage prevention and treatment of sleep disorders. Please save the date and check our website www.wasmcongress.com



City of Arts and Sciences, Valencia



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www.wasmcongress.com