World Sleep 2019

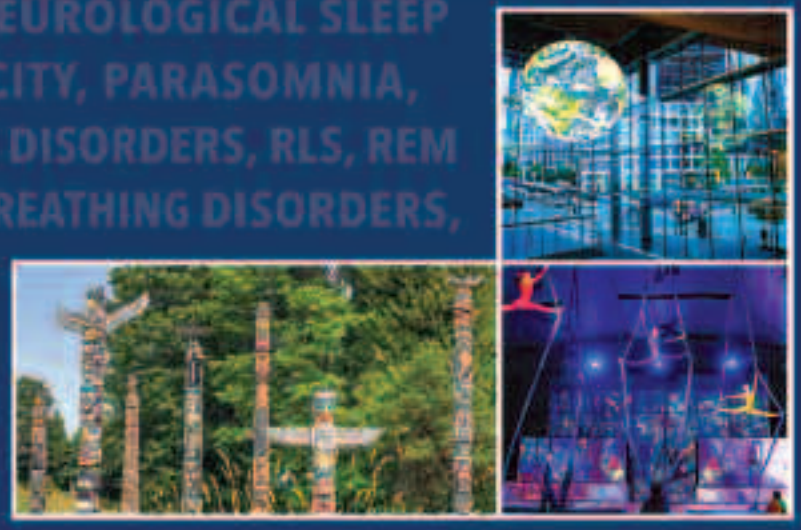
SEPTEMBER 20-25, 2019 VANCOUVER, CANADA

15th WORLD SLEEP

THE BEST OF SLEEP MEDICINE & RESEARCH | worldsleepcongress.com

SCIENTIFIC PROGRAM

AGING & DEVELOPMENTAL ISSUES, BASIC RESEARCH, BEHAVIOR COGNITION & DREAMING, CHRONOBIOLOGY/CIRCADIAN DISORDERS, EXCESSIVE DAYTIME SLEEPINESS, HYPERSOMNIA, INSOMNIA, MEMORY MOVEMENT DISORDERS, NARCOLEPSY, NEUROLOGICAL SLEEP DISORDERS, NEURAL PLASTICITY, PARASOMNIA, PHARMACOLOGY, PSYCHIATRIC DISORDERS, RLS, REM BEHAVIOR DISORDERS, SLEEP BREATHING DISORDERS, TECHNOLOGY/TECHNICAL



WORLD SLEEP SOCIETY

Canadian Sleep Society | Société Canadienne du Sommeil

Download the World Sleep 2019 App

App Store | Google Play

MedSleep

Celebrating 15 Years Dedicated to Sleep

Join Our Team!

MedSleep's network of clinics, formed in 2004, are committed to providing the highest quality sleep services across Canada. We strive to be pioneers in Sleep Medicine, foster education and actively participate in clinical research.

In 2019 we are on track to see in excess of 30,000 patients across Canada. The team of individuals who has made this possible is comprised of career oriented and dedicated sleep professionals. Our physicians, sleep technicians and administrative teams take great pride in providing the highest quality of care. 96% of our patients recommend us to their family and friends! Our national coverage has facilitated our ability to also provide full-service telemedicine services to our physicians and patients.

Our Clinical Research Team has worked on several studies involving first class Pharma Organizations as well as world-renowned organizations such as Stanford University.

MedSleep Clinics Across Canada:

British Columbia
Campbell River
Duncan
Nanaimo
Prince George
Penticton
Vancouver
Victoria

Alberta
Calgary
Edmonton

Ontario
Brampton
Carleton Place (Ottawa)
Etobicoke
Kingston
Milton
Niagara Falls
Pembroke
Thornhill
Toronto Central

New Brunswick
Dieppe
Fredericton
Moncton

Nova Scotia
Dartmouth
Halifax

We have opportunities for:

Sleep Physicians

Now Recruiting Medical Directors for British Columbia L1 Labs:

Physicians with a completed Fellowship in Sleep Medicine with any co-specialty to practice in our facilities, either in person or via Tele-Medicine Video services. The practice includes out-patient sleep medicine clinical services for the full spectrum of sleep disorders, interpretation of polysomnography and portable monitoring studies. No hospital on-call is required. We offer favourable fee splitting with opportunity for both fee-for-service and additional third-party income. We welcome CVs to: doctors@medsleep.com

RPSGT & RT's:

We have clinics in many cities across Canada and offer an environment that helps you to progress in your career by offering solid educational and practical opportunities in the science of sleep. Whether you are interested in a management position, scoring, collection or treatment services, we have many different opportunities! We welcome CV's to jobs@medsleep.com.

Chief Medical Director - Dr. Adam Blackman
adamb@medsleep.com

President - Kosta Tsambourlianos
kostas@medsleep.com | 1-416-802-2382

INVITATION

Dear Colleagues and Friends,

Welcome to World Sleep 2019, the 15th World Sleep Congress. This year's program is our most expansive ever, featuring over 320 hours of scientific content categorized into 12 keynotes, 89 symposia, 17 courses, 10 panel discussions, 192 oral abstract presentations, 1,121 poster abstracts, plus affiliated meetings and workshops.

Who will you meet? What will you discover? World Sleep Society prides itself on creating a scientific congress that brings the best in sleep medicine and research to one location. In Vancouver, we offer an opportunity for an open discussion forum of sleep professionals from around the globe. Sleep physicians, researchers, psychologists, dentists, technologists, educators, and trainees from over 70 countries will meet to advance knowledge on sleep science, sleep in public health, sleep health, and the diagnosis and treatment of sleep disorders.

Your involvement in this congress is greatly valued. You may learn and share knowledge and skills that will advance sleep health around the world, which is the mission by which our organization abides. We are pleased you are joining us for the science, learning, collegiality and social events at World Sleep 2019. It's an exciting time in the field of Sleep Medicine and Research. Thank you for attending!

We hope you'll save the date to attend our next congress, World Sleep 2021, hosted by the Brazilian Sleep Society and taking place in Rio de Janeiro, Brazil from September 10-15, 2021.

Sincerely,

World Sleep 2019 Program Committee

World Sleep 2019
SEPTEMBER 20-25, 2019 · VANCOUVER, CANADA
A JOINT CONGRESS OF WORLD ASSOCIATION OF SLEEP MEDICINE AND WORLD SLEEP FEDERATION

2019 PROGRAM COMMITTEE

Maree Barnes, MD
Institute for Breathing and Sleep,
Austin Hospital
Heidelberg, Australia

Célyne Bastien, PhD
School of Psychology, Laval University CERVO Brain Research Institute
Québec, QC, Canada

John Fleetham MD, FRCP(C)
University of British Columbia
Vancouver, BC, Canada

Reut Gruber, PhD
Department of Psychiatry, Faculty of Medicine, McGill University
Director, Attention Behavior and Sleep Lab, Douglas Mental Health University Institute
Montréal, QC, Canada

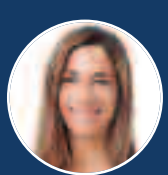
Yuichi Inoue, MD, PhD
Department of Psychiatry, Department of Somnology, Tokyo Medical University Yoyogi Sleep Disorder Center,
Japan Somnology Center
Toyko, Japan

Clete Kushida, MD, PhD, FAASM
Chief & Medical Director, Division of Sleep Medicine
Professor, Department of Psychiatry and Behavioral Sciences, Stanford University Medical Center
California, United States

Charles M. Morin, PhD
Professor of Psychology, Director, Sleep Research Centre, Université Laval
Quebec City, QC, Canada

Allan O'Bryan
World Sleep Society
Minnesota, United States

Thomas Penzel, PhD
Charité Universitätsmedizin Berlin
Interdisciplinary Center of Sleep Medicine
Berlin, Germany



Dalva Poyares, MD, PhD
Federal University of São Paulo
São Paulo, Brazil

View full summaries, learning objectives and more on worldsleepcongress.com.

About the Organizers

WORLD SLEEP SOCIETY (founded by World Association of Sleep Medicine and World Sleep Federation) has collaborated with the **CANADIAN SLEEP SOCIETY** to host **WORLD SLEEP 2019**. The venue selected for the congress on sleep medicine from **SEPTEMBER 20-25, 2019** in Vancouver, Canada is the Vancouver Convention Centre. On British Columbia's waterfront with mountain backdrop, the Vancouver Convention Centre offers convenient access to downtown visitor amenities.

Canadian Sleep Society / Société Canadienne du Sommeil

The Canadian Sleep Society is a national organization committed to improving sleep for all Canadians through: support for research, promotion of high-quality clinical care, education of professionals and the public, and advocacy for sleep and sleep disorders medicine. Learn more at www.css-scs.ca.

WORLD SLEEP SOCIETY
ADVANCING SLEEP HEALTH WORLDWIDE
Founded by WORLD ASSOCIATION OF SLEEP MEDICINE and WORLD SLEEP FEDERATION

The fundamental mission of the World Sleep Society is to advance sleep health worldwide. World Sleep Society 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. World Sleep Society 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. World Sleep Society will seek to encourage development and exchange of information for world-wide and regional standards of practice for sleep medicine.

2019 International Committee

Lamia Afifi (Egypt)
Fernanda Almeida (Canada)
Ellemarije Altena (The Netherlands)
Suliman Alsaeed (Canada)
Babak Amra (Iran)
Monica Andersen (Brazil)
Isabelle Arnulf (France)
Najib Ayas (Canada)
Lucie Barateau (France)
Maree Barnes (Canada)
Célyne Bastien (Canada)
Kevin Boyd (United States)
Oliviero Bruni (Italy)
Antje Büttner-Teleagă (South Korea)
Christian Cajochen (Switzerland)
Johathan Cedernaes (Sweden)
Yong Won Cho (Korea)
Frances Chung (Canada)
Rene Cortese (United States)
Megan Crawford (United Kingdom)
Antonio Culebras (United States)
Yves Dauvilliers (France)
Tom de Boer (The Netherlands)
Valerie Cochen De Cock (France)
Joseph De Koninck (Canada)
Lourdes DelRosso (United States)
Marijke Dieltjens (Belgium)
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Jennifer Goldschmied (United States)
Nadia Gosselin (Canada)
Michael Gradisar (Australia)
Michael Grandner (United States)
Madeleine Grigg-Damberger (United States)
Reut Gruber (Canada)
Christian Guilleminault (United States)
Monika Haack (United States)
Fang Han (China)
Yuichi Inoue (Japan)
Poul Jennum (Denmark)
Amy Jordan (Australia)
Ulf Kallweit (Germany)
Marta Kaminska (Canada)
Hakan Kaynak (Turkey)
Sharon Keenan (United States)
Tetyana Kendzerska (Canada)
Jun Kohyama (Japan)
Vijaya Krishnan (India)
Clete Kushida (United States)
Leon Lack (Australia)
Gilles Lavigne (Canada)
Clement Lin (Tiawan)
Geraldo Lorenzi-Filho (Brazil)
Yuanming Luo (China)
Hrudananda Mallick (India)
Marie Marklund (Sweden)
Geert Mayer (Germany)
Charles Morin (Canada)
Sutapa Mukerjee (Australia)
Alister Neill (New Zealand)
Sona Nevsimalova (Czech Republic)
Hanna M. Ollila (United States)
Judith Owens (United States)
Murat Ozgoren (Turkey)
Allan Pack (United States)
Luciana Palombini (Brazil)
Liborio Parrino (Italy)
Thomas Penzel (Germany)
Jean-Louis Pépin (France)
Ronaldo Delmonte Piovezan (Brazil)
Gabriel Natan Pires (Brazil)
Tarja Porkka-Heiskanen (Finland)
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F. Javier Puertas Cuesta (Spain)
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Leon Rosenthal (United States)
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Josée Savard (Canada)
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Shoi Shi (Japan)
Garima Shukla (India)
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Karel Sonka (Czech Republic)
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Tina Sundelin (Sweden)
Kate Sutherland (Australia)
Eva Svanborg (Sweden)
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Claudia Trenkwalder (Germany)
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Malcolm Von Schantz (United Kingdom)
Tomoko Wakamura (Japan)
Frederick D. Weber (The Netherlands)
Shelly Weiss (Canada)
Yun Kwok Wing (Hong Kong)
Brendon Yee (Australia)

2019 Local Organizing Committee
Fernanda Almeida (Canada)
Najib Ayas (Canada)
Célyne Bastien (Canada)
John Fleetham (Canada)
Reut Gruber (Canada)

2019 Congress Courses Committee
Maree Barnes (Australia)
Reut Gruber (Canada)
Robert Thomas (United States)

Technologist Committee
Samantha Briscoe (United Kingdom)
Michael Eden (Canada)
Laree Fordyce (Canada)
Shalanda Mitchell (United States)
Thomas Penzel (Germany)
Andrea Ramberg (United States)
Rogerio Santos-Silva (Brazil)

Trainee Day Committee
Amy Bender (Canada)
Michael Braganza (Canada)
Johnathan Charest (Canada)
Kevin Grace (Canada)
Samuel Laventure (Canada)
Indra Narang (Canada)
John Peever (Canada)
Ryan Perry (Canada)
Thierry Provencher (Canada)

CME Day Committee
Najib Ayas (Canada)
Célyne Bastien (Canada)
Rob Comey (Canada)
James Lee (Canada)
Gordon Stahl (Canada)

Dental Committee
Fernanda Almeida (Canada)
Nelly Huynh (Canada)
Kate Sutherland (Australia)

Opening Ceremony
Sunday, September 22, 2019
6:00pm to 7:30pm | Ballroom A

Opening Blessing
First Nations indigenous peoples of Canada

Opening Remarks
Charles Morin
President, World Sleep Society

Welcome to Vancouver
Mary Ackenhusen
CEO Vancouver Coastal Health

Scientific Program Overview
Maree Barnes and Dalva Poyares
Program Committee

Canadian Sleep Society Awards
Charles Samuels
President, Canadian Sleep Society

Elsevier Sleep Medicine Awards
Antonio Culebras
Chair, Sleep Medicine Awards Committee

Young and New Investigator Awards
Allan O'Bryan
Executive Director, World Sleep Society

Distinguished World Sleep Day Awards
Liborio Parrino
Chair, World Sleep Day Committee

CircusWest's FIRELIGHT
Mystical circus spectacular inspired by West Coast of Canada and featuring rainforest creatures, nature backdrops, live music, singing and choreographic circus acts.

Reception and networking in Ballroom Foyer will follow

Gala Dinner
A ticket will need to be purchased to attend the Gala Dinner portion.
Monday, September 23 | 6-8:30pm
We invite you to attend the Gala Dinner which will feature entertainment, dinner and beverages. 6:00pm-7:00pm Cocktail Reception; 7:00pm-8:30pm Dinner; 8:30pm-11:30pm attend Blues Night.

Blues Night
No ticket needed.
Monday, September 23 | 8:30pm – 11:30pm
Celebrate sleep! Immediately following the Gala Dinner, join colleagues for live musical entertainment, cold hors d'oeuvres, cash bar and dancing in Banquet Room 305 of the Vancouver Convention Centre.

Closing Ceremony
Wednesday, September 25 | 6-7pm
The Closing Ceremony will be in Ballroom A of the Vancouver Convention Center. Attend to hear WSS Election results as well as statements from Dr. Charles Morin (out-going President), Dr. Birgit Högl (incoming President) and Executive Director of Brazilian Sleep Society, Andrea Bacelar, announcing World Sleep 2021. A reception will follow.

World Sleep 2019 is bringing the best of sleep medicine and research to Vancouver.

Presented by
World Sleep Society
3270 19th Street NW • Suite 109
Rochester, MN 55901
(507) 316-0084
info@worldsleepsociety.org
www.worldsleepsociety.org

Hosted by Canadian Sleep Society
https://css-scs.ca • info@css-scs.ca

Meeting Location
Vancouver Convention Centre West
1055 Canada Pl
Vancouver, BC V6C 0C3
www.vancouverconventioncentre.com

Registration Desk
Registration materials (including badges, final programs, tickets, etc.) will be provided at the registration counter located at the Vancouver Convention Centre. Tickets are required for entry for Saturday and Sunday's pre-congress courses, and Monday's gala dinner. Tickets can be purchased online (worldsleepcongress.com/register) or at the Registration Desk.

Badge Identification
All congress participants and guests must wear a World Sleep 2019 congress badge. Badges allow entrance to the scientific sessions and access to the convention center. Your cooperation with this policy is appreciated. Recycle your badge holder after the congress by dropping it off at the Registration Desk. Replacement badges can be obtained at the Registration Desk for a fee.

Membership Questions
World Sleep Society membership records may be reviewed and purchased at the Registration Desk. Details about membership are available on worldsleepsociety.org.

Registration Desk Hours
Friday 4:00pm - 8:00pm
Saturday 7:00am - 5:00pm
Sunday 7:00am - 6:00pm
Monday 7:00am - 7:00pm
Tuesday 7:00am - 7:00pm
Wednesday 7:00am - 6:00pm

Speaker Ready Room 201
Presenting speakers can use the Speaker Ready Room to upload their PowerPoint presentations, test software, and make changes and adjustments to their presentations. Speakers are required to upload their presentation in the Speaker Ready Room 12 hours prior to their session. A technician will be available to assist as needed.

Speaker Ready Room 201 Hours
Saturday 7:00am - 5:00pm
Sunday 7:00am - 5:00pm
Monday 7:00am - 5:00pm
Tuesday 7:00am - 5:00pm
Wednesday 7:00am - 5:00pm

Press Room
Members of the press are encouraged to utilize the Speaker Ready Room to work on their stories or access the internet, and other resources that are needed. Press are encouraged to attend the Press Meeting on Monday, September 23, 2019 in Room 201 from 1:00pm - 1:30pm.

World Sleep Job Board
Find a career or employee in the field of Sleep Medicine & Research. World Sleep Society is proud to offer a job board in Society Hall. Employers can leave job listings. Postings may be removed if deemed irrelevant or inappropriate.

Exhibit Hall Hours
Monday 10:00am - 4:00pm
Tuesday 10:00am - 4:00pm
Wednesday 10:00am - 4:00pm

Host Hotels
Vancouver Marriott Pinnacle Downtown
1128 West Hastings Street
Vancouver, BC V6E4R5

Four Seasons Hotel Vancouver
791 W Georgia Street
Vancouver, BC V6C 2T4

Pinnacle Hotel Harbourfront
1133 West Hastings Street
Vancouver, British Columbia V6E 3T3

Westin Bayshore
1601 Bayshore Drive
Vancouver, BC V6G 2V4

EXchange Hotel Vancouver
475 Howe Street, Vancouver, BC V6B 2B3

Hotels & Lodging
worldsleepcongress.com/vancouver/hotel

CME
Continuing Medical Education (CME) Credit for Physicians Accreditation Statement:
This activity, World Sleep 2019, has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME), and applicable governing bodies. 39 prescribed credits are offered through the American Academy of Family Physicians. Physicians should claim only the credit commensurate with the extent of their participation in the activity. CME is awarded for pre-congress courses, keynote lectures, symposia sessions and technologist workshops.

A CME fee of US$25 is payable online with registration or in-person at the registration desk to obtain CME documentation.

CME Record of Attendance
A Record of Attendance is provided to all attendees at on-site registration. The Record of attendance allows attendees to calculate their own credits of participation in the educational activity. The total number of credits participants can earn per day is noted on the Record of Attendance. Below each day is a line to record the actual number of credits during which you participated in the educational activity. It is recommended that you record your actual credits daily as you proceed through the CME activity. Upon conclusion of the CME activity, please total the number of credits you have recorded on the top half of the form, sign it, and return it to the registration desk. The bottom half of the form represents your Record of Attendance, which you must retain for your records. Please make sure the number of credits claimed in both sections coincide. You will receive a CME certificate of attendance indicating the number of credits you claimed. The CME certificate can be used for requesting credits in accordance with state licensing boards, specialty societies, or other professional associations. CME certificates will be sent by email within three weeks following the congress.

CME Activity Evaluation
The overall CME activity evaluation will be emailed following the activity to the email address that was provided when you registered. The CME activity evaluation is brief and will only take a few minutes to complete. Faculty evaluation forms will be provided electronically via email to registrants. Completed faculty evaluation forms should be completed online at the conclusion of the CME activity and within one week of the congress. Your feedback is very important to us and will be used for planning future programs, as well as identifying faculty strengths and opportunity for growth.

CME Registration Required
Please complete the following steps to receive CME credit:
1. Purchase the $25 CME fee at registration desk.
2. Obtain the CME Record of Attendance at registration desk.
3. Turn in CME Record of Attendance once completed to registration desk or email to info@worldsleepsociety.org by November 1, 2019.
4. Complete the faculty, session and congress evaluations. Evaluations will be collected electronically and sent via email each day.

Recording Device Policy

No recording devices, audio or visual, may be used during CME activities. Duplication, distribution, or excerpting of this program, without the express written permission of World Sleep Society, is strictly prohibited. All of the proceedings of this program, including the presentation of scientific papers, are intended for limited publication only, and all property rights in the material presented, including common-law copyright, are expressly reserved by the Faculty, World Sleep Society, and/or CME provider. No statement of presentation made is to be regarded as dedicated to the public domain. Any sound reproduction, transcript or other use of the material presented at this CME activity without the permission of the World Sleep Society and CME provider is prohibited to the full extent of common-law copyright in such material.

Cameras and recording devices are not allowed to be used in the scientific meeting rooms at any time. Violation of this rule could result in removal from the Congress along with the confiscation of the film and/or recording device.

Electronic Devices

Please turn all electronic devices (cellular telephones, pagers, etc.) to silent mode. As a courtesy to the presenters and other participants, phone calls should be taken outside of the scientific sessions.

Seating

Scientific sessions are filled on a first-come, first-served basis. World Sleep Society along with the Program Committee reviewed the scientific sessions to anticipate demand to match the room size with expected seating. Occasionally, a talk will have higher demand than expected. We encourage delegates to arrive early for best possible seating.

PROGRAM TYPES

- Symposium
- Course
- Dental Symposium
- Basic Science Symposium
- Satellite Symposium
- Social Event
- Pediatric Symposium
- Affiliated Meeting
- Keynote
- Poster Abstract
- Exhibition
- Administration
- Oral abstracts
- Surgery Symposium
- Technologist Program
- Panel Discussion

Download the World Sleep 2019 App

We are pleased to offer an interactive mobile app for World Sleep 2019. The app will allow you to view and search speaker names, sessions, rooms and topics. It will also include details about social events such as the Opening Ceremony. The World Sleep 2019 App will be available in the Google Play, and iTunes/iOS stores.

Download on the App Store

GET IT ON Google Play

PHILIPS

NightBalance

Philips NightBalance
We're on your side

Providing a therapy option for positional obstructive sleep apnea (POSA) patients and lapsed CPAP users

Join us for discussion about positional OSA:

Positional Obstructive Sleep Apnea: Treatment and Evidence
Speakers: Prof. Jean-Louis Pepin and Dr. Nico de Vries
When: Monday, September 23, 12:30–2:00 pm

See **NightBalance** for yourself.
Visit us at **booth #120**

www.philips.com/nightbalance

innovation + you

A Better Night's Sleep Study

Thanks to Nonin Technology

Sleep labs worldwide trust Nonin for reliable OSA screening.

NONIN

nonin.com/sleep

WORLD SLEEP SOCIETY

ISRTP

INTERNATIONAL SLEEP RESEARCH TRAINING PROGRAM

WORLDSLEEPSOCIETY.ORG/ISRTP

MENTORING & TRAINING SLEEP RESEARCH LEADERS

JOIN US FOR THE FOLLOWING PANEL DISCUSSIONS AT WORLD SLEEP 2019

MONDAY, SEPTEMBER 23
4:30PM – 6:00PM | ROOM 118

D03: Sleep medicine and research training opportunities throughout the world

Chair: *Clete Kushida (United States)*

Speakers: *Brian Rowe (Canada); Hrudananda Mallick (India); Zoran Dogas (Croatia); Brendon Yee (Australia); Dalva Poyares (Brazil)*

TUESDAY, SEPTEMBER 24
3:00PM – 4:30PM | ROOM 118

D05: The International Sleep Research Training Program (ISRTP) of World Sleep Society

Chair: *Clete Kushida (United States)*

Speakers: *Clete Kushida (United States); Susan Redline (United States); Simon Kyle (United Kingdom); Allan Pack (United States); Brendon Yee (Australia); Dalva Poyares (Brazil); Thomas Penzel (Germany); Adelf Xu (China)*

PHILIPS This educational initiative is supported by Philips.

WORLD SLEEP SOCIETY

WORLD SLEEP SOCIETY

ISRTP

INTERNATIONAL SLEEP RESEARCH TRAINING PROGRAM

PROGRAM OVERVIEW

Apply to join the ISRTP as a **1) MENTEE/TRAINEE, 2) MENTOR or 3) ISRTP SITE.** The aims of the program are to offer training in the field of sleep research, to provide collaborative co-mentorship between mentors in the trainee's home institution and in the host country to promote coordinated, culture-appropriate career development, and to enrich the growing field of sleep medicine and research with future sleep research leaders.

The ISRTP strives to connect institutions, societies and individuals to provide the best training for the next generation of sleep professionals.

CURRENT ISRTP MENTOR SITES

- Harvard University:
  Division of Sleep Medicine at Harvard Medical School
- Stanford University: Division of Sleep Medicine
- University of Oxford:
  Sleep and Circadian Neuroscience Institute
- University of Pennsylvania:
  Center for Sleep & Circadian Neurobiology
- University of Sydney:
  Woolcock Institute of Medical Research

KEY TOPICS COVERED IN MENTORSHIP

- Research study development, implementation and replication (including study design, selection of specific aims and outcomes, data analysis, authorship, and ethical concerns)
- Clinical exposure to management of sleep disorders
- Scientific communication skills (including presenting and publishing results)
- Obtaining and managing research funds
- Career development

KEY MENTEE OUTCOMES

- Acquisition of knowledge and understanding of sleep science
- Acquisition of research skills
- Clinical exposure to the management of sleep disorders
- Accepted manuscripts
- Funded grants
- Academic and societal leadership

HOW TO BECOME A MENTEE/TRAINEE IN THE CLASS OF 2021

To apply as a Mentee/Trainee in the program, applicants must first complete a Communication Skills/English intake interview, conducted by World Sleep Society. During this interview, the Mentee/Trainee must cover the motivation behind application, as well as prior research experience. Additionally, the following criteria must be met:

- Education requirement: PhD, MD, or equivalent degree
- Completed application
- A personal statement detailing plans for research and how to develop sleep research in country of origin (max 500 words)
- Biosketch
- Letter of support from home mentor related to academic performance
- Letter of support from home institution
- Letter of support from members of home institution who are active in research
- Copy of funding letter or evidence of funding OR provisional status until letter of funding received

APPLICATION DEADLINE (MENTEE/TRAINEE)
January 15, 2020

Applications will be accepted by email only and should arrive no later than January 15, 2020. All submissions will receive a confirmation email within 3 business days.

HOW YOU & YOUR INSTITUTION CAN BECOME AN ISRTP MENTOR & SITE

Criteria for our ISRTP Mentors & Sites will be assessed every 3-year cycle. Currently, to become a Mentor/Site, the following must be present:

- Availability of primary and secondary mentors
- Availability of educational/training content for sleep science and research in English
- Availability for both basic and clinical research
- Active current and prospective research projects
- Ability to arrange clinical observations
- A track record of training students, peers or other trainees

APPLICATION DEADLINE (MENTOR/SITE)
January 15, 2020

To apply for the ISRTP program or for more information, visit **worldsleepsociety.org/ISRTP**.

"Join us at World Sleep 2021 to discover and share the finest and most recent science of sleep, state-of-the art Sleep Medicine & Research—all in one of the most beautiful cities of the world, Rio de Janeiro, Brazil."
– Birgit Högl, MD (Austria), President, World Sleep Society

SAVE THE DATE FOR THE 16th WORLD SLEEP

World Sleep Society & Brazilian Sleep Society Present

WORLD SLEEP

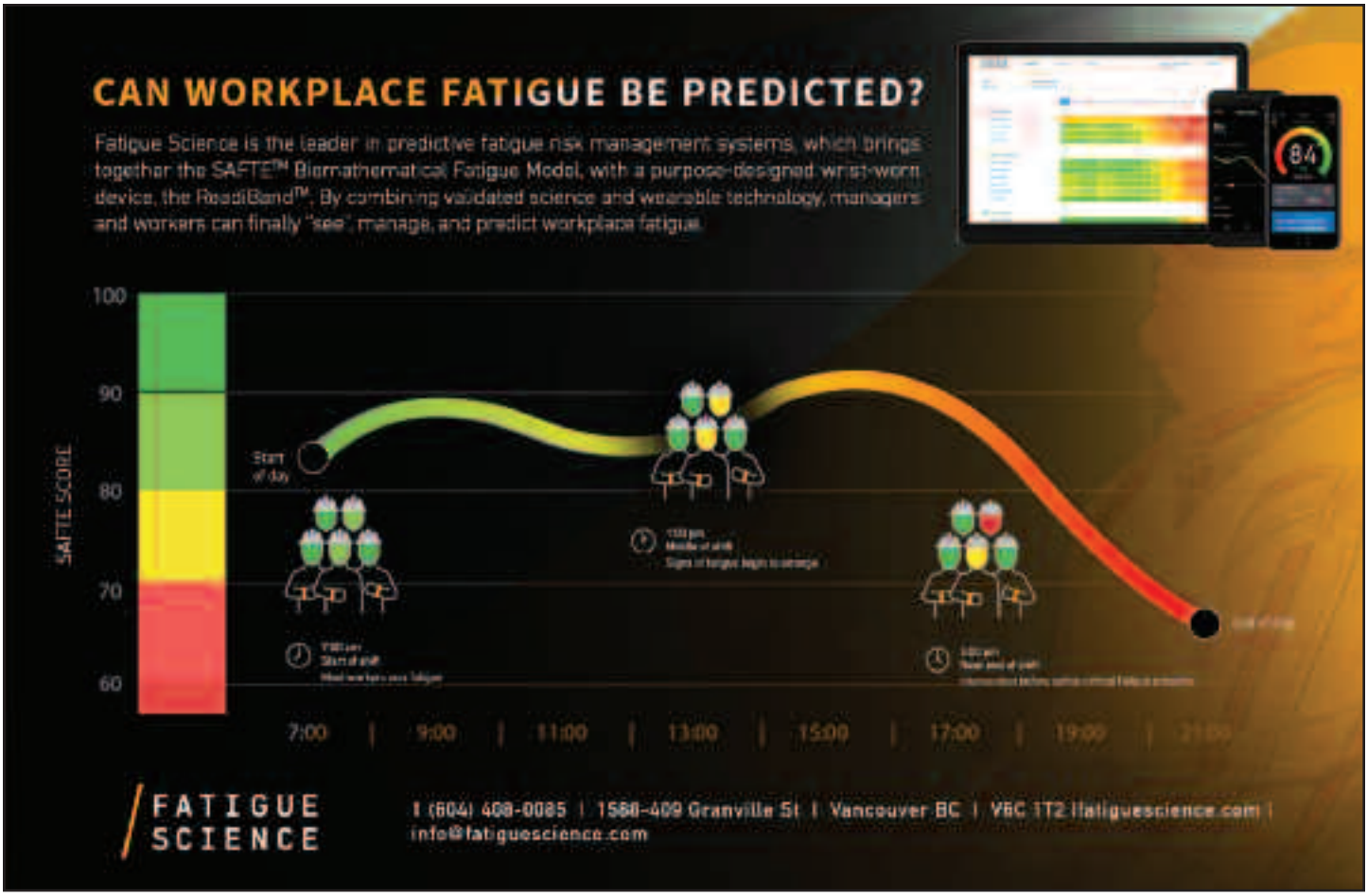
september 10-15 | 2021 rio de janeiro BRAZIL

worldsleepcongress.com

World Sleep Society presents the World Sleep Congress every two years in varying locations around the world.

WORLD SLEEP SOCIETY

Brazilian Sleep Society



World Sleep 2019 Opening Ceremony

Ballroom A | Sunday, September 22, 2019 | 6:00pm – 7:30pm

Opening Blessing
First Nations indigenous peoples of Canada

Opening Remarks
Charles Morin – President, World Sleep Society

Welcome to Vancouver
Mary Ackenhusen – CEO Vancouver Coastal Health

Scientific Program Overview
Maree Barnes and Dalva Poyares – Program Committee

Canadian Sleep Society Awards
Chuck Samuels – President, Canadian Sleep Society

Elsevier Sleep Medicine Awards
Antonio Culebras – Chair, Sleep Medicine Awards Committee

Young and New Investigator Awards
Allan O'Bryan – Executive Director, World Sleep Society

Distinguished World Sleep Day Awards
Liborio Parrino – Chair, World Sleep Day Committee

CircusWest mystical circus spectacular

Reception and networking

CSS Distinguished Scientist Award

Dr. Kazue Semba, Dalhousie University
The role of microglia in sleep regulation

CHIR-IRSC Distinguished Lecturer Award in Sleep Sciences

Charles M. Morin, The Canadian Institutes of Health Research (CIHR) – Institute of Circulatory and Respiratory Health (ICRH) and the Canadian Sleep Society (CSS) have established an inaugural and biennial Distinguished Lecturer Award in Sleep Sciences in recognition of an individual's outstanding contribution to the advancement of sleep sciences in Canada. Charles M. Morin, PhD has been selected as the first-ever recipient.

Young or New Investigator Elsevier Awards

The international panel of sleep specialists convened to score abstracts for the selection of the Elsevier Awards for 2019 to recognize two young basic and clinical sleep specialists.

Christian Guilleminault Award for Research

Winda L. Ng, The relationship between excessive daytime sleepiness, disability, and mortality, and implications for life expectancy

Elio Lugaresi Award for Education

Guiseppe Lanza, Impaired short-term plasticity in restless legs syndrome: A pilot rTMS study

Young or New Investigator Awards 2019

The following award winners will present during the Monday, September 23, 2019 Young Investigator Session at 3:00pm in Room 220.

Brooke Shafer (Canada)
APNEA-HYPOPNEA INDEX IS ASSOCIATED WITH INCREASED LOOP GAIN DURING SLEEP AT ASCENDING ALTITUDES

Emi Hasegawa (Japan)
NEURAL CIRCUITS OF CATAPLEXY

Eva A.M. van Poppel (Netherlands)
MANIPULATING MEMORY DURING SLEEP

Giulia Avvenuti (Italy)
THE CORPUS CALLOSUM IS ESSENTIAL FOR THE CROSS-HEMISPHERIC PROPAGATION OF SLEEP SLOW WAVES: A HIGH-DENSITY EEG STUDY IN TOTAL CALLOSOTOMIZED PATIENTS

Hannah Schoch (United States)
DEVELOPMENTAL TRAJECTORY OF SLEEP DISTURBANCES IN A SHANK3 MOUSE MODEL OF AUTISM

Véronique Latreille (Canada)
THE HUMAN K-COMPLEX: INSIGHTS FROM COMBINED SCALP-INTRACRANIAL EEG RECORDINGS

The following award winners will present during the Tuesday, September 24, 2019 Young Investigator Session at 3:00pm in Room 110.

Ambra Stefani (Austria)
MULTIMODAL MRI REVEALS ALTERATIONS OF SENSORIMOTOR CIRCUITS IN RESTLESS LEGS SYNDROME

Ashley Ingiosi (United States)
A ROLE FOR ASTROGLIAL CALCIUM ACTIVITY IN SLEEP AND SLEEP HOMEOSTASIS

Camila Hirotsu (Switzerland)
PERIODIC LIMB MOVEMENT DURING SLEEP AND THE INCIDENCE OF CARDIOMETABOLIC OUTCOMES: THE HYPNOLAUS STUDY

Chun Ting Au (Hong Kong)
EFFECTS OF SLEEP EXTENSION ON DAYTIME BLOOD PRESSURE IN SLEEP-DEPRIVED ADOLESCENTS

Martha Graciela Lopez Canul (Canada)
EFFECT OF THE SELECTIVE MT1 RECEPTOR PARTIAL AGONIST UCM871 IN THE ACTIVITY OF NOREPHINEPRINE NEURONS OF THE LOCUS CERULEUS DURING SLEEP/WAKE CYCLE

Rachel K. Rowe (United States)
MICROGLIA ELIMINATION CAUSED PROLONGED INCREASES IN SLEEP FOLLOWING BOTH PERIPHERAL AND CENTRAL INFLAMMATORY CHALLENGES IN THE MOUSE

The following award winners will present during the Wednesday, September 25, 2019 Young Investigator Session at 3:00pm in Room 110.

Christoph Patrick Werner (Australia)
ADVERSE EVENTS OF PLACEBO FOR PARTICIPANTS IN PHARMACOLOGICAL RCTS FOR INSOMNIA – A SYSTEMATIC REVIEW AND META-ANALYSIS

Daniel S. Joyce (United States)
HACKING THE HUMAN CIRCADIAN SYSTEM WITH MICROFLASHES OF LIGHT

Jonathan Cedernaes (Sweden)
TRANSCRIPTIONAL BASIS FOR RHYTHMIC CONTROL OF HUNGER AND METABOLISM WITHIN THE AGRP NEURON

Kirusanthy Kaneshwaran (Canada)
SLEEP FRAGMENTATION, ACCELERATED AGING AND INCREASED ACTIVATION OF MICROGLIA, AND COGNITIVE IMPAIRMENT IN OLDER ADULTS

Angel Tsz Yan Wong (United Kingdom)
SLEEP DURATION AND BREAST CANCER INCIDENCE: RESULTS FROM THE MILLION WOMEN STUDY AND A META-ANALYSIS OF PUBLISHED STUDIES

Zhuo Fang (Canada)
BRAIN ACTIVATION TIME-LOCKED TO SLEEP SPINDLES ASSOCIATED WITH HUMAN COGNITIVE ABILITIES

World Sleep Day
HOSTED BY WORLD SLEEP SOCIETY

World Sleep Day Awards

2019 World Sleep Day Distinguished Activity Awards

Portuguese Sleep Association | APS, ANSS, ESRS

Fernando Alberto Ceballos Fuentes, MD, MsC | Guatemalan Association of Sleep Medicine

Miguel Meira e Cruz | Portuguese Association of Chronobiology and Sleep Medicine; Sleep Unit of Cardiovascular Center, University of Lisbon, School of Medicine

Dr. Prerana Garg & Dr. Himanshu Garg | Sleep Cure Solutions Montida Veeravigrom, MD | Sleep Society of Thailand

Dr N. Ramakrishnan | Nithra Institute of Sleep Sciences

2019 World Sleep Day Honorable Mention

Lew Mun Yee | Am Life International

Rayleigh Ping Ying Chiang | International Sleep Science Technology Association

Elena Maricela Majano, MD | Bernes Medical Sleep and Neurological Private Center

Dr. Manvir Bhatia | Neurology Sleep Centre

György G. Németh | Hungarian Sleep Association

Ximena Alvarado | Hospital de Clínicas La Paz Bolivia
Dr. Laura Palagini | AIMS

2018 World Sleep Day Distinguished Activity Awards

Dr. Nagarajan Ramakrishnan (India) | Nithra Instiute of Sleep Sciences

Dr. Montida Veeravigrom (Thailand) | Sleep Society of Thailand

Dr Himanshu Garg & Dr Prerana Chopra (India) | Aviss Health, Centre for Sleep Disorders

Dr. Elena Majano (El Salvador) | Bernes Medical Sleep and Neurological Center

Mr. Lew Mun Yee (Multicountry) | AmLife International

Paula Araujo (Brazil) | Brazilian Sleep Society

2018 World Sleep Day Honorable Mention

Dr. Petar Chipev, Prof. Ivan Staykov (Bulgaria) | Bulgarian Society of Somnology

Dr. Reut Gruber, Debbie Will-Dryden (Canada) | Canadian Sleep Society & Sleeping Children Around the World

Matilde Valencia-Flores & Montserrat Reséndiz-García (Mexico) | Sleep Disorders Clinic, UNAM and INCMNSZ

Dr. Laura Palagini (Italy) | AIMS

David Lira (Peru) | Instituto Peruano de Neurociencias – IPN

Dr. Antonio Culebras (United States) | Upstate Sleep Center

Luca Roberti (Italy) | Associazione Apnoici Italiani Onlus

Melissa Lipford, MD (United States) | Westin Hotels & Resorts

Jitka Bušková (Czech Republic) | NIMH

The next World Sleep Day® will be March 13, 2020

World Sleep Day 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 World Sleep Day Committee of World Sleep Society (founded by WASM and WSF) and aims to lessen the burden of sleep problems on society through better prevention and management of sleep disorders. World Sleep Day is held the Friday before Spring Vernal Equinox of each year.

worldsleepday.org

WORLD SLEEP 2019 features the most current, world-class scientific content in the field of sleep medicine and research. Plan to attend keynote presentations by some of the brightest minds in the field.

MONDAY KEYNOTES

Ballroom A

Monday
8:00am - 8:45am

Charles M. Morin, PhD

Professor of Psychology, Director, Sleep Research Centre, Université Laval
Quebec City (Canada)

K01: Insomnia: Public health burden and new trends in treatment development and dissemination

Introduction: Allison G. Harvey (United States)

Insomnia is a prevalent public health problem associated with significant burden for the individual (e.g., increased risks of depression and hypertension) and for society (e.g., increased disability and absenteeism from work). There is solid evidence that cognitive behavioral therapy for insomnia (CBT-I) is effective, safe, and well accepted by patients. CBT-I is also recognized as first-line therapy for chronic insomnia in most clinical practice guidelines. Despite this strong research-based evidence and endorsement by the scientific and professional community, CBT-I is still not widely available as first-line therapy and remains underutilized by health care practitioners. Several innovative and cost-effective treatment delivery models (e.g., Internet-based therapy, telemedicine) have yielded promising results, but it has not yet solved the imbalance between supply and demands. This lecture will review the public health significance of insomnia, summarize the current state of evidence on insomnia therapies, highlight some paradoxes between research evidence and clinical practices, and outlines future trends for improving treatment access and optimizing outcome.

Room 118

Monday
8:00am - 8:45am

Peter Cistulli, MD, PhD

Professor of Sleep Medicine, Charles Perkins Centre, University of Sydney
Director, Centre for Sleep Health & Research
Royal North Shore Hospital (Australia)

K02: Oral appliance therapy for obstructive sleep apnea: Ready for prime time

Introduction: Fernanda Almeida (Canada)

Oral appliances (OA) have emerged as the leading alternative to positive airway pressure (PAP) for Obstructive Sleep Apnoea (OSA) treatment. There is a strong evidence base demonstrating OA therapy improves OSA in the majority of patients, including some with more severe disease. They are generally well tolerated, and patients often prefer OA over PAP treatment. Despite the superior efficacy of PAP over OA, randomized controlled trials comparing the two indicate similar improvement in health outcomes such, as sleepiness, quality of life, driving performance, blood pressure, and other cardiovascular measures. The evidence base strongly supports the use of OA therapy in the management of OSA.

Commemorative Posters >>

Posters commemorating World Sleep 2019 are available for congress attendees. Pick up your poster at the Registration Desk!

MONDAY KEYNOTES

Ballroom A

Oliviero Bruni, MD
Sapienza University of Rome, Pediatrics (Italy)

Monday
2:00pm - 2:13pm

Christian Guilleminault Memorial

Introduction: Reut Gruber (Canada)

Dr Oliviero Bruni will deliver a 10 minute memorial celebrating the life of Dr. Christian Guilleminault. The memorial talk will be followed by Dr Mary Carskadon keynote address. He will be introduced by Dr Reut Gruber of Canada.

Ballroom A

Mary A. Carskadon, PhD
Professor, Psychiatry and Human Behavior, Warren Alpert Medical School of Brown University I Director, Chronobiology and Sleep Research Laboratory, EP Bradley Hospital (United States)

Monday
2:13pm - 2:55pm

K03: Adolescent sleep: Timing is everything…or is it?

A major focus of Dr. Carskadon's scientific activities is research examining interrelations between the circadian timing system and sleep/wake patterns of children, adolescents, and young adults. Her findings have raised public health issues regarding the consequences of insufficient sleep for adolescents as well as concerns about early starting times of schools. Her work has affected education policy, prompting the AAP, CDC, and others to promote later school timing for adolescents and many school districts to delay school start times for high school students. Carskadon's current research includes an evaluation of how sleep and circadian timing influence smell, taste, food choices, and food consumption in overweight and assessing effects of serial nights of alcohol on sleep and next-day function in adults. Proposed new projects seek to (1) assess the chronic and direct effects of caffeine on circadian and homeostatic sleep systems in early adolescents; (2) evaluate sleep health disparities in inner-city children with chronic asthma; (3) measure gene methylation and genotype with observational phenotyping and experimental sleep interventions in young adults.

TUESDAY KEYNOTES

Ballroom A

Dieter Riemann, PhD
Professor of Clinical Psychophysiology | Head of the Dept. of Clinical Psychology & Psychophysiology
Centre for Mental Disorders, Medical Faculty, University of Freiburg (Germany)

Tuesday
8:00am - 8:45am

K04: Sleep, insomnia and mental health: A chance for prevention?

Introduction: Colin Espie (United Kingdom)

Almost all mental disorders are accompanied by sleep disturbances, especially depressive disorders. In this patient group, not only rather specific changes of REM sleep (shortening of REM sleep latency) and a decrease of Slow Wave Sleep) occur, but from a clinical point of view insomnia complaints (prolonged sleep latency, sleep maintenance problems, early morning awakening) may dominate the picture. Insomnia disorder, on the other hand, without co-morbidity has been shown to be a risk factor for depression and other mental disorders. It is postulated that the relationships between insomnia and mental disorders are bi-directional and that the treatment of insomnia may serve a a preventive strategy for mental illness.

75+
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3,000+
ATTENDEES

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HOURS OF LEARNING

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TUESDAY KEYNOTES

Room 211

Eve Van Cauter, PhD

Professor, Department of Medicine – Section of Endocrinology, Diabetes and Metabolism
University of Chicago (United States)

Tuesday
8:00am - 8:45am

K05: Interactions between Sleep, circadian rhythms and body weight regulation

Introduction: Maree Barnes (Australia)

This lecture will review and discuss the epidemiologic evidence that has linked insufficient sleep duration, poor sleep quality and/or circadian misalignment to the risk of obesity, noting that sleep deficiency and circadian disruption strongly interact. Putative causal mechanisms identified in laboratory interventions involving several nights of experimental sleep restriction, fragmentation or extension with and without circadian disruption will be presented, with an emphasis on the role of endocrine mediators in the dysregulation of energy balance. The potential benefits of optimizing sleep and circadian alignment to reduce the risk of obesity, and promote weight maintenance or weight loss will be discussed.

Ballroom A

Luciano Drager, MD, PhD

Associate Professor of Medicine
University of Sao Paulo Medical School (Brazil)

Tuesday
2:00pm - 2:45pm

K06: Discussing the impact of obstructive sleep apnea and sleep duration: Time to put the pieces together

Introduction: Matt Naughton (Australia)

Obstructive sleep apnea (OSA) and sleep duration abnormalities are traditionally associated with daytime symptoms and cardiometabolic risk. However, the vast majority of studies addressing OSA has not evaluated sleep duration, and vice versa. This talk will intend to provide a practical discussion addressing the complex interaction between these major sleep issues in our Society highlighting recent evidence approaching OSA and sleep duration with objective tools.

Certificate of Attendance

All attendees of World Sleep 2019 will receive an official Certificate of Attendance. Certificates will be available at the Information Desk Monday through Wednesday.

TUESDAY KEYNOTES

Tuesday
2:00pm - 2:45pm

Room 211

Masashi Yanagisawa, MD, PhD
Director and Professor, International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba (Japan)
Adjunct Professor, Molecular Genetics Neuroscience, UT Southwestern Medical Center (United States)

K07: Toward the mysteries of sleep

Introduction Pierre-Hervé Luppi (France)

Although the executive neurocircuitry and neurochemistry for sleep/wake switching has been increasingly revealed in recent years, the fundamental mechanism for homeostatic regulation of sleep, as well as the neural substrate for "sleepiness" or sleep need, remains unknown. We have initiated a large-scale (>9,000 mice thus far) forward genetic screen of sleep/wake phenotype in ENU-mutagenized mice based on EEG/EMG measurements. By combining linkage analysis, whole-exome sequencing and genome editing, we have identified the causal mutations in several pedigrees with marked sleep abnormalities (Nature 539:378-383, 2016). We expect that the mutated genes will provide new insights into the elusive cellular/molecular pathway regulating sleep. Indeed, through a systematic cross-comparison of the hypersomnia Sleepy mutants and sleep-deprived wildtype mice, we have recently found that the cumulative phosphorylation state of a specific set of mostly synaptic proteins may be the molecular substrate of sleep need (Nature 558:435-439, 2018).

Tuesday
2:00pm - 2:45pm

Room 212

Diego García-Borreguero, MD, PhD
Neurologist, Director
Sleep Research Institute, Madrid (Spain)

K08: Restless legs syndrome/ periodic limb movements of sleep: New insights into neurobiology and treatment

Introduction: Birgit Högl (Austria)

Restless legs syndrome (RLS) is a common chronic neurological disorder that manifests through sensorimotor symptoms that interfere with rest and sleep. It has a wide spectrum of symptom severity affecting not only quality of life but also possibly increasing cardiovascular risk. Our knowledge on the causes and mechanisms of RLS is still limited: several susceptible single nucleotide polymorphisms such as BTBD9 and MEIS1, which are thought to be involved in embryonic neuronal development, have been reported to be associated with RLS. An increasing number of studies have suggested an important role of brain iron deficiency in the pathophysiology of RLS. Moreover, a number of recent preclinical and clinical studies suggest a hypoadenosinergic state leading to hypersensitive cortico-striatal input and leading to a striatal presynaptic hyperglutamatergic and hyperdopaminergic neurotransmission. Understanding the interplay between these dysfunctional striatal circuitries might be crucial to develop new therapeutic targets.

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World Sleep OnDemand

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WEDNESDAY KEYNOTES

Ballroom A

Clare Anderson, PhD
Associate Professor, Monash Institute of Cognitive & Clinical Neuroscience, and School of Psychological Sciences | Monash University (Australia)

K09: Biomarkers and determinants of drowsy driving: Advances in reducing crash risk

Wednesday
8:00am - 8:45am

Introduction: Allan Pack (United States)

Drowsiness remains a significant cause of motor vehicle crash, responsible for approximately 20% of all crashes. This talk will examine current approaches to reducing the impact of drowsy driving, including (i) understanding of the characteristics of drowsiness-related motor vehicle crashes, beyond falling asleep (e.g., gaze allocation and distractibility); (ii) an evaluation of the available technologies that map onto these different signatures of impairment; (iii) a look into the future of roadside testing, including the development of novel biomarkers of the drowsy state that yield promise for implementation into road side tests; and (iv) revisiting the associations between subjective awareness of drowsiness and adverse driving events.

Room 211

Seung Bong Hong, MD, PhD
Department of Neurology
Sungkyunkwan University
(Republic of Korea)

K10: Perspectives of neuroimaging in sleep disorders

Wednesday
8:00am - 8:45am

Introduction: Thien Thanh Dang-Vu (Canada)

Multiple modalities and techniques of brain imaging can be used to investigate whether sleep disorders are associated with changes in brain structure or functional/molecular activities. Here we reviewed multimodality neuroimaging findings using magnetic resonance imaging (MRI), functional magnetic resonance imaging (fMRI), diffusion tensor imaging (DTI), single-photon emission computed tomography (SPECT) and positron emission tomography (PET) in major sleep disorders (i.e., obstructive sleep apnea, primary insomnia, narcolepsy, REM sleep behavior disorder, restless legs syndrome). The studies reviewed include neuroanatomical assessments (voxel-based morphometry, surface-based morphometry, and magnetic resonance spectroscopy, etc.), metabolic/functional investigations (PET, SPECT, fMRI), and ligand marker measurements. Based on the current state of the research, we suggest that brain imaging is a useful approach to assess the structural, functional, and molecular correlates of sleep disorder brain. Up-to-date neuroimaging techniques therefore provide a worthy tool to gain insight into possible pathophysiological mechanisms of sleep disorders in humans.

Abstract Supplement

All accepted abstracts will be published in a supplement of *Sleep Medicine* (Elsevier). The *Sleep Medicine* Journal abstract supplement should be published and available online (PubMed) by December 2019.

WEDNESDAY KEYNOTES

Ballroom A

Atul Malhotra, MD

Chief of Pulmonary, Critical Care and Sleep Medicine | Kenneth M. Moser Professor Director of Sleep Medicine, UC San Diego Health System (United States)

K11: Sleep apnea endotypes and phenotypes: Use of new technology in obstructive sleep apnea

Wednesday
2:00pm - 2:45pm

Introduction: Najib Ayas (Canada)

Obstructive sleep apnea(OSA) afflicts up to 1 billion people worldwide. OSA treatment is clearly beneficial yet limited by variable efficacy and/or incomplete adherence to therapy. We have used a mechanistic approach to understand the endotypes underlying OSA with a view towards personalizing treatment based on individual characteristics. Using microRNAs, plasma exosomes, metabolomics and microbiome assessment, we are working to understand basic mechanisms underlying disease to identify which patients are at risk of particular complications, allowing more sophisticated trial designs in the future. We are further using Big Data to assess real world patient outcomes and to implement new technologies to optimize adherence with existing technologies.

Room 211

Yves Dauvilliers, MD, PhD

Professor of Neurology and Physiology | Director of the Sleep Disorders Centre University of Montpellier (France)

K12: From somnolence in the general population to narcolepsy

Wednesday
2:00pm - 2:45pm

Introduction: Jaques Montplaisir (Canada)

Hypersomnolence is a frequent multidimensional complaint with either excessive daytime sleepiness and/or excessive quantity of sleep. It is associated with altered quality of life, accidents, and often with cardiovascular, psychiatric and neurodegenerative pathologies. Many different sleep and non-sleep causes are associated with hypersomnolence. The criteria currently used for its presence and the related disorders need to be improved and revised. Its evaluation requires rigorous clinical and neurophysiologic approaches; however, there is no gold standard measurement and no quantifiable biologic markers. The more severe causes of central disorders of hypersomnolence are narcolepsy type 1 and type 2, idiopathic hypersomnia, being all orphan sleep disorders. The main pathophysiologic feature is thought to reflect a deficiency of arousal systems, rather than an overactivity of sleep systems or an imbalance between both. However, there are large gaps in our understanding of the neurobiological causes of hypersomnolence and its associated disorders except for narcolepsy type 1 with impaired neurotransmission of hypocretin/orexin, by a probable autoimmune process. The biologic hallmarks of other central hypersomnias remain unknown. We need to 1/ better understand what determines an individual's sleep need and identify biological markers for the different forms of hypersomnolence, 2/ better precise how disorders of hypersomnolence progress over years, and 3/ better define and understand the proposed association between depression, disorders of attention, fatigue and hypersomnolence.

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Excessive daytime sleepiness and symptoms of REM sleep dysregulation, such as cataplexy, reflect the underlying sleep-wake state instability of narcolepsy.[1-3] Various manifestations of sleep-wake state instability can have a significant impact on people living with narcolepsy.[4-8]
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AGENDA

12:30 PM Introduction
Richard Bogan, MD—Chair
(United States)

12:35 PM OSA Patients with Residual Daytime Sleepiness: Who Are the Patients? What Are the Causes?
Patrick Strollo Jr., MD
(United States)

1:00 PM Treatment of Residual Daytime Sleepiness in OSA Patients
Atul Malhotra, MD
(United States)

1:25 PM Case Presentations
Richard Bogan, MD

1:55 PM Take-Home Tips for Clinical Practice

Meet the Professor — Room 121
2:00 PM to 2:45 PM

CHAIR

Richard Bogan, MD

Associate Clinical Professor
University of South Carolina School of Medicine
Columbia, South Carolina

FACULTY

Atul Malhotra, MD

Professor of Medicine
University of California San Diego
La Jolla, California

Patrick Strollo Jr., MD

Professor of Medicine and Clinical and Translational Science
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania

Tuesday, September 24, 2019

12:30 PM – 2:00 PM

Vancouver Convention Centre West
Ballroom A
1055 Canada Pl • Vancouver, BC

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Vancouver Convention Centre
Auditorium 220
Vancouver, Canada

CHAIR

Charles M. Morin

FACULTY

Alon Avidan

Phyllis Zee

Insomnia in Alzheimer's Disease: Sleep Matters

Tuesday, 24 September 2019

12:30 – 14:00

Chair: Charles M. Morin

AGENDA

12:30 – 12:35	Welcome
12:35 – 12:55	Insomnia in the Elderly – Night and Day Impact on Patients and Caregivers
12:55 – 13:15	Addressing Sleep Issues in Patients With Dementia
13:15 – 13:35	Managing Insomnia in Alzheimer's Disease
13:35 – 14:00	Q&A Panel Discussion

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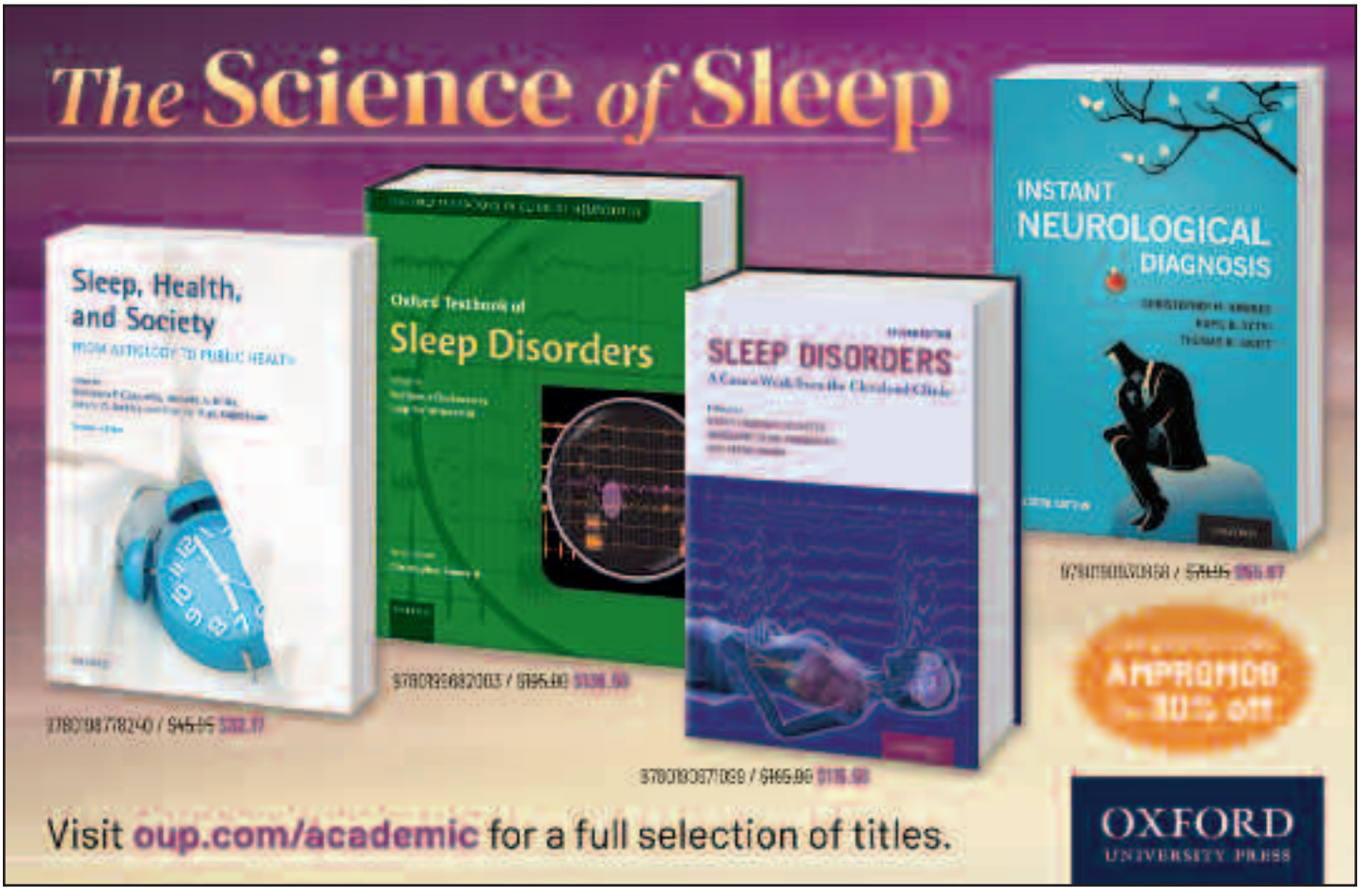

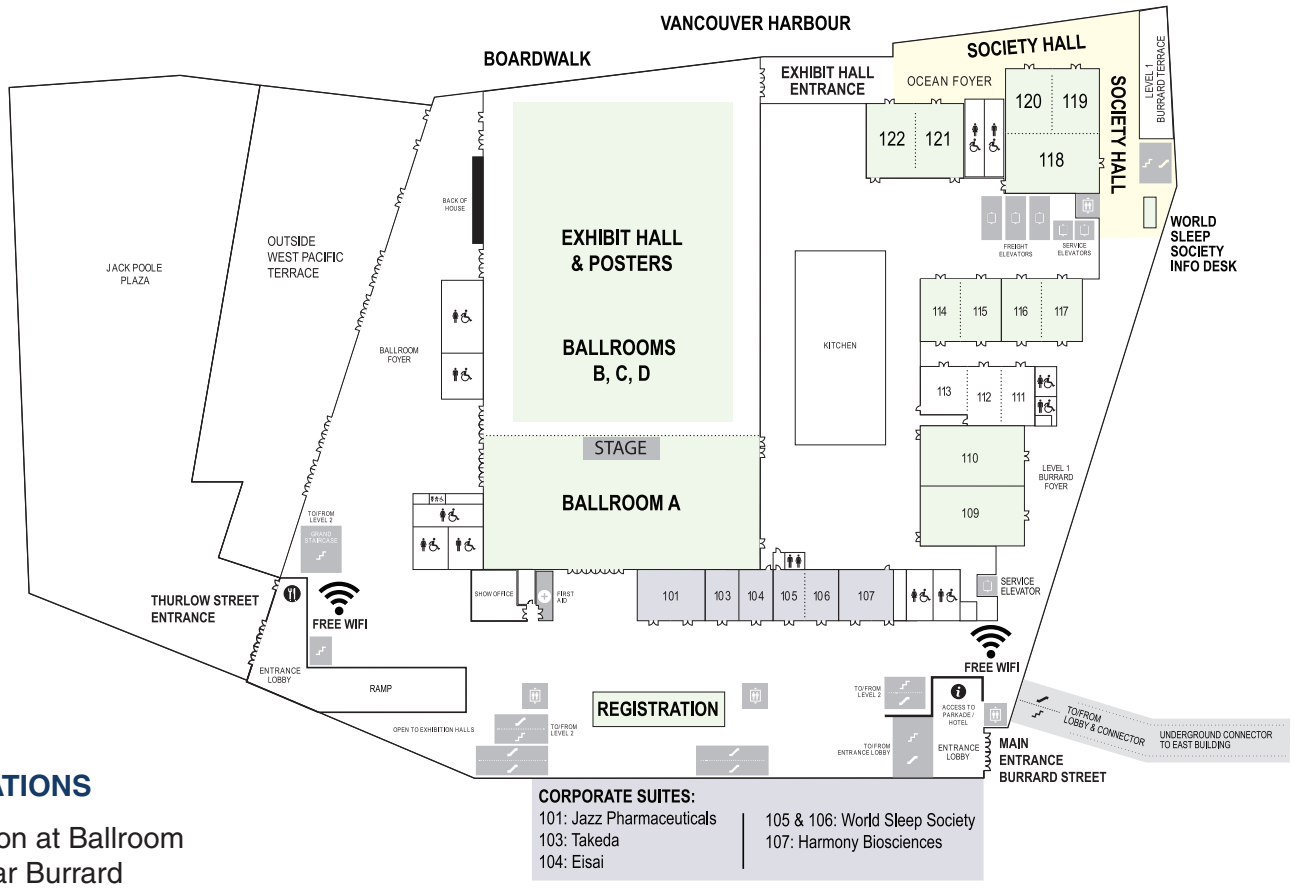

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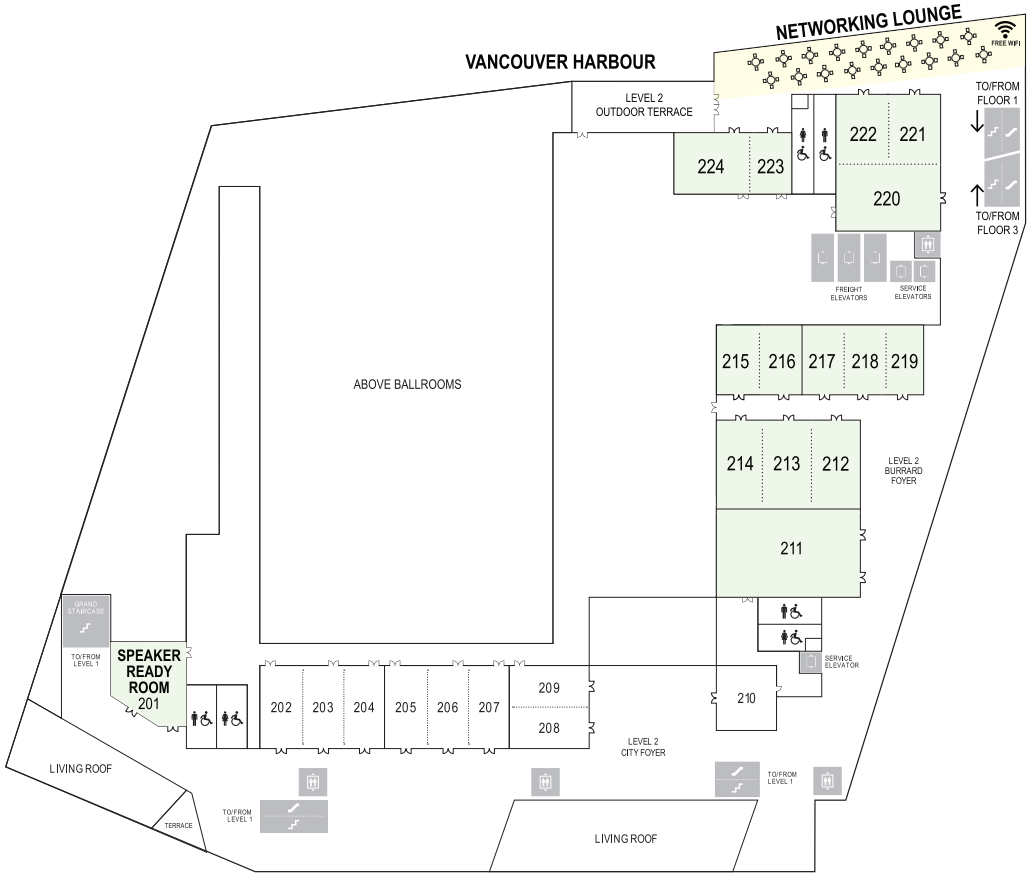
WEST LEVEL 1 I FLOOR PLAN

KEY LOCATIONS

- Registration at Ballroom Lobby near Burrard Street Entrance in WEST Building of Vancouver Convention Centre
- Ballroom A: Opening ceremony, keynotes, and closing ceremony
- Ballroom B, C & D: Exhibition & Posters
- Speaker Ready Room: 201

WEST LEVEL 2 I FLOOR PLAN



SATURDAY, SEPTEMBER 21, 2019	
C01 Pediatric sleep	8:00am – 5:00pm I Room 214
C02 Obstructive sleep apnea: Diagnosis and management	8:00am – 4:00pm I Rooms 220-222
C05 Recent advances in RLS treatment	8:00am – 12:00pm I Room 122
C06 Polysomnographic measurements during sleep, beyond the AHI	8:00am – 12:00pm I Room 224
C07 Circadian clinical science	8:00am – 12:00pm I Rooms 118-120
A01 Sleep disorders primary care education course	8:00am – 4:50pm I Room 109
A02 Sleep-circadian biomarkers workshop	8:00am – 11:45am I Rooms 217-219
C17 Dental sleep medicine (part 1)	8:30pm – 5.00pm I Room 211
Sleep Expo 2019: Understanding Narcolepsy and Hypersomnia: Insights and perspectives	8:30am – 4:30pm I Rooms 116 -117
Sleep Expo 2019: Vigilance & Wake-A-Thon: How to promote sleep and injury prevention	9:00am – 12:30pm I Room 110
C08 Staging and scoring	1:00pm – 5:00pm I Rooms 215-216
C09 Portable devices for clinical practice and sleep research	1:00pm – 5:00pm I Room 122
C10 Circadian basic science: Human circadian rhythms from OMICS to behavior	1:00pm – 5:00pm I Rooms 118-120
C15 Parasomnia	1:00pm – 5:00pm I Room 224
SUNDAY, SEPTEMBER 22, 2019	
C03 Sleep health in women	8:00am – 4:00pm I Rooms 220-222
C04 Year in review	8:00am – 5:00pm I Room 214
C11 Insomnia disorder: Assessment, diagnosis and management (part 1)	8:00am – 12:00pm I Rooms 118-120
C12 Aging, neurodegeneration and sleep	8:00am – 12:00pm I Rooms 215-216
C13 Cardiovascular and renal consequences of sleep apnea	8:00am – 12:00pm I Room 110
Technologist program: AAST	8:00am – 4:45pm I Room 224
A03: International Restless Legs Syndrome Study Group annual meeting & course	8:00am – 6:00pm I Rooms 116-117
A04: Sleep-circadian informatics data harmonization	8:00am – 11:45am I Rooms 217-219
C17 Dental sleep medicine (part 2)	8:30am – 12:50pm I Room 211
A05: The CCS/CIHR-ICRH Trainee Research Day	8:50am – 4:00pm I Room 122
The Great Canadian Sleepwalk: The road to good nights	9:30am – 11:00am I Coal Harbour
Sleep Expo 2019: Public Lecture Series	9:30am – 6:00pm I Room 109
Sleep Expo 2019: Author Tables	10:00am – 2:00pm I 109 Foyer
C14 Insomnia disorder: Assessment, diagnosis and management	12:45pm – 4:00pm I Room 118-120

View full summaries, learning objectives and more on worldsleepcongress.com.

[SUNDAY CONTINUED]	
C16 Narcolepsy and other hypersomnias: Diagnostic approach and management	1:00pm – 5:00pm I Rooms 215-216
A06: A critical review of orofacial myofunctional therapy & sleep disordered breathing: Phenotyping, clinical markers, and early intervention	1:00pm – 5:45pm I Room 110
A07: Management of sleep related breathing disorder seminar: A surgical perspective	2:00pm – 6:00pm I Rooms 217-219
Poster Session 1	4:30pm – 6:00pm I Exhibition
Opening Ceremony	6:00pm – 8:00pm I Ballroom A
MONDAY, SEPTEMBER 23, 2019	
K01: Insomnia: Public health burden and new trends in treatment development and dissemination	8:00am – 8:45am I Ballroom A
K02: Oral appliance therapy for obstructive sleep apnea: Ready for prime time (a state of the art review of the field)	8:00am – 8:45am I Rooms 118-120
S01: Opioids and sleep disordered breathing: From biomedical research to clinical practice	9:00am – 10:30am I Ballroom A
S02: Sleep, sleep disorders and perioperative care	9:00am – 10:30am I Rooms 118-120
S03: Prognostic value of the different available methods for upfront prediction of treatment outcome with non-CPAP therapy towards a more personalized treatment of obstructive sleep apnea	9:00am – 10:30am I Room 109
S04: The subjective experience of sleep: Emerging objective correlates	9:00am – 10:30am I Rooms 121-122
S06: Effects of sleep and sleep loss on synaptic function	9:00am – 10:30am I Rooms 212-214
S07: Innovative multi-cultural approaches to sleep health education for children and families	9:00am – 10:30am I Rooms 217-219
S08: Sleep-disordered breathing and maternal and fetal outcomes of pregnancy	9:00am – 10:30am I Rooms 220-222
O01: Insomnia treatment and mechanisms	9:00am – 10:30am I Rooms 116-117
O02: Pediatric issues	9:00am – 10:30am I Rooms 215-216
O03: Basic research: Animals	9:00am – 10:30am I Room 110
T01: Clinical guidelines on manual/APAP titrations (workshop)	9:00am – 10:30am I Rooms 223-224
Exhibition	10:00am – 4:00pm I Exhibition
S09: Treatment modalities for sleep apnea patients with complex comorbidities	10:45am – 12:15pm I Room 109
S10: Bridging basic research to clinical aspects in REM sleep behavior disorder: From bench to bed	10:45am – 12:15pm I Rooms 121-122
S11: Large-scale genomic studies advancing understanding of sleep and circadian biology and disorders in humans	10:45am – 12:15pm I Room 211
S12: Using sleep to maximize the mental and cognitive health of young people around the world	10:45am – 12:15pm I Rooms 212-214
S13: Sleepy heads and anesthesia: Anesthetic implications of disorders of daytime hypersomnolence	10:45am – 12:15pm I Rooms 215-216
S14: Multidimensional sleep health: A new paradigm for understanding sleep-health relationships	10:45am – 12:15pm I Rooms 220-222
O04: Women	10:45am – 12:15pm I Rooms 116-117
T02: Reading and analyzing PAP downloads (workshop)	10:45am – 11:30am I Rooms 223-224
D01: Defining and identifying "restless sleep disorder" among sleep disorders of childhood	10:45am – 12:15pm I Rooms 118-120
T03: PSG, PAP, & CO2 'Oh My'	11:30am – 12:30pm I Rooms 223-224

[MONDAY CONTINUED]	
Restless legs syndrome: Progress and pitfalls	12:30pm – 2:00pm I Rooms 220-222
Insomnia: It's a night and day issue	12:30pm – 2:00pm I Rooms 121-122
Positional sleep apnea and its treatment	12:30pm – 2:00pm I Rooms 217-219
Waking up to narcolepsy: Strategies to improving outcomes	12:30pm – 2:00pm I Ballroom A
Beyond the AHI: Nox Medical Industry Workshop	1:00pm – 1:45pm I Rooms 215- 216
Patient selection: The new paradigm for collaborative treatment success in patients with OSA	1:00pm – 1:45pm I Rooms 223-224
Press meeting	1:00pm – 1:30pm I Room 201
World Sleep Day networking event	1:00pm – 2:00pm I Room 109
Meet the Professor	1:45pm – 2:45pm I Rooms 116-117
T04: Adult PSG scoring bootcamp (workshop)	2:00pm - 3:30pm I Room 223-224
Christian Guilleminault Memorial	2:00pm – 2:13pm I Ballroom A
K03: Adolescent sleep: Timing is everything…or is it? Christian Guilleminault Memorial Lecture	2:13pm – 2:55pm I Ballroom A
S15: Management of sleep disordered breathing in specific populations: New insights from recent publications	3:00pm – 4:30pm I Ballroom A
S16: Imaging and sleep apnea: Can we predict the presence of disease and treatment outcomes?	3:00pm – 4:30pm I Room 109
S17: Frontiers of dissemination of CBT for sleep and circadian problems in mental and physical health	3:00pm – 4:30pm I Rooms 121-122
S18: The molecular and physiological mechanisms of sleep	3:00pm – 4:30pm I Room 211
S19: Novel strategies to personalize OSA treatment and care from adolescents to adults	3:00pm – 4:30pm I Rooms 212-214
S20: Pathophysiological insights from animal models of restless legs syndrome	3:00pm – 4:30pm I Rooms 217-219
O05: SBD Epidemiology	3:00pm – 4:30pm I Rooms 116-117
O06: Better memory with better sleep	3:00pm – 4:30pm I Room 215-216
O07: Young or new investigator awards	3:00pm – 4:30pm I Room 220-222
O08: REM sleep behavior	3:00pm – 4:30pm I Room 220-222
D02: Alternative diagnostic approaches to childhood obstructive sleep apnea	3:00pm – 4:30pm I Rooms 118-120
T05: Pediatric PSG complex case studies (workshop)	4:00pm - 5:00pm I Room 223-224
S05: Sleep and bidirectional changes in synaptic plasticity: The untold story	4:30pm – 6:00pm I Room 211
S21: The nature of arousals: An update for the 21st century	4:30pm – 6:00pm I Ballroom A
S22: Advances in precision application of dental appliances: Indications, design, and prognostic risk	4:30pm – 6:00pm I Room 109
S23: Using eHealth to bridge the gap between research and practice for insomnia: Examples from across the lifespan	4:30pm – 6:00pm I Rooms 121-122
S24: Sleep-wake disturbance and the aging brain: Insights into the impact of poor sleep and sleep-disordered breathing on neurodegeneration	4:30pm – 6:00pm I Rooms 212-214
S25: New insights on sleep at high altitude	4:30pm – 6:00pm I Rooms 217-219
O09: Sleep and aging	4:30pm – 6:00pm I Room 116-117

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[MONDAY CONTINUED]	
O10: Pediatrics	4:30pm – 6:00pm I Rooms 215- 216
O11: Psychiatric disorders	4:30pm – 6:00pm I Room 110
D03: Sleep medicine and research training opportunities throughout the world	4:30pm – 6:00pm I Rooms 118-120
Poster session 2	5:30pm – 7:00pm I Exhibition
Gala Dinner	6:00pm – 8:30pm I Banquet Room 301
Blues Night	8:30pm – 11:30pm I Banquet Room 305
TUESDAY, SEPTEMBER 24, 2019	
World Sleep Society Membership Meeting	7:00am – 7:50am I Rooms 118-120
K04: Sleep, insomnia and mental health: A chance for prevention?	8:00am – 8:45am I Ballroom A
K05: Interactions between sleep, circadian rhythms and body weight regulation	8:00am – 08:45am I Room 211
S26: Placing patient needs first: Designing personalized care in sleep medicine	9:00am – 10:30am I Ballroom A
S27: New insights into light's non-visual impact on sleep and circadian physiology	9:00am – 10:30am I Rooms 118-120
S28: Memory processing as a biological drive for sleep? The impact of waking cognition on subsequent sleep: Evidence from basic and clinical research	9:00am – 10:30am I Room 109
S29: REM Sleep and insomnia: So emotional!	9:00am – 10:30am I Rooms 121-122
S30: New sleep circuits and their role in disorders	9:00am – 10:30am I Room 211
S31: Combination therapy approaches for OSA: Can we improve effectiveness?	9:00am – 10:30am I Rooms 212-214
S32: Cross-cultural sleep: Sleep around the world and across the lifespan	9:00am – 10:30am I Rooms 217-219
O12: Insomnia mechanisms and pathophysiology	9:00am – 10:30pm I Rooms 116-117
O13: Restless legs syndrome	9:00am – 10:30pm I Rooms 215-216
O14: Circadian	9:00am – 10:30pm I Room 110
T06: Board of Registered Polysomnographic Technologists: Future of sleep	9:00am – 10:30am I Rooms 223-224
A08:SRS-CSS Frontiers: Sleeping well and staying in rhythm	9:00am – 10:00am I Rooms 220-222
Exhibition	10:00am – 4:00pm I Exhibition
A09: SRS-CSS Frontiers: Sleep: Impact on physiology and public health	10:15am – 12:00pm I Rooms 220-222
S33: Orexin receptor antagonists in the treatment of insomnia	10:45am – 12:15pm I Ballroom A
S34: Sensory–motor network of the restless legs syndrome (RLS): Electrophysiology and imaging	10:45am – 12:15pm I Room 109
S35: Progression of childhood sleep-disordered breathing - natural and after intervention	10:45am – 12:15pm I Rooms 121-122
S36: What else can we learn from sleep oscillations?	10:45am – 12:15pm I Room 211
S37: Novel biomarkers in sleep and circadian research: Requirements and real-world applications	10:45am – 12:15pm I Rooms 212-214
S38: Sleep in elite athletes: Implications for performance and recommendations for optimal recovery	10:45am – 12:15pm I Rooms 215-216
S39: Update on non OSA sleep breathing abnormalities: Upper airway resistance syndrome and inspiratory flow limitation	10:45am – 12:15pm I Room 110

[TUESDAY CONTINUED]	
O15: Dental	10:45am – 12:15pm I Room 116-117
D04: Melatonin use in children: The promise and the peril	10:45am – 12:15pm I Rooms 118-120
T07: Medications and pharmacological effects on PSG	10:45am – 11:30pm I Rooms 223-224
T08: Quality assurance in the sleep lab	11:30am – 12:30pm I Rooms 223-224
Clinical update in servo-ventilation	12:30pm – 2:00pm I Rooms 217-219
Excessive daytime sleepiness in patients with OSA: Impact, causes and treatment strategies	12:30pm – 2:00pm I Ballroom A
Harmony Biosciences Industry Satellite Symposium	12:30pm – 2:00pm I Rooms 118-120
Insomnia in Alzheimer's disease: Sleep matters	12:30pm – 2:00pm I Rooms 220-222
DREEM: Insomnia workshop	1:00pm – 1:45pm I Room 110
Meet the Professor: R. Bogan, P. Strollo, A Malhotra	2:00pm – 2:45pm I Rooms 121-122
K06: Discussing the impact of obstructive sleep apnea and sleep duration: Time to put the pieces together	2:00pm – 2:45pm I Ballroom A
K07: Toward the mysteries of sleep	2:00pm – 2:45pm I Room 211
K08: Restless legs syndrome/periodic limb movements of sleep: New insights into neurobiology and treatment	2:00pm – 2:45pm I Rooms 212-214
T09: Complex sleep apnea	2:00pm – 3:30pm I Rooms 223-224
S40: New insights into the pathophysiology, clinical manifestations and treatment of sleep related eating disorder	3:00pm – 4:30pm I Ballroom A
S41: Patient selection for adenotonsillectomy- what can the RCTs teach us and what's the way forward?	3:00pm – 4:30pm I Room 109
S42: Treatment of insomnia in co-morbid obstructive sleep apnea and insomnia	3:00pm – 4:30pm I Rooms 121-122
S43: Genetic and epidemiological triggers of sleepiness: From natural variation to severe sleep disorders	3:00pm – 4:30pm I Room 211
S44: Upper airway physiology and new treatment in patients with OSA	3:00pm – 4:30pm I Rooms 212-214
S45: New perspectives in the management of pediatric narcolepsy	3:00pm – 4:30pm I Rooms 217-219
O16: Treatments CPAP and nonCPAP	3:00pm – 4:30pm I Rooms 116-117
O17: Sleep, Behavior and Cognition	3:00pm – 4:30pm I Rooms 215-216
O18: ESRS/WSS co-hosted young or new investigator award	3:00pm – 4:30pm I Room 110
A10: SRS-CSS Frontiers: Obstructive sleep apnea and the risk of cognitive decline in older adults	3:00pm – 4:00pm I Rooms 220-222
D05: The International Sleep Research Training Program (ISRTP) of World Sleep Society	3:00pm – 4:30pm I Rooms 118-120
T10: Residual EDS with CPAP; MSLT and/or MWT (workshop)	3:45pm – 5:00pm I Rooms 223-224
A11: SRS-CSS Frontiers: Sleep: Impact on neurological function	4:15pm – 6:00pm I Rooms 220-222
S46: Central sleep apnea: PAP, ASV or Phrenic Nerve Stimulation?	4:30pm – 6:00pm I Ballroom A
S47: From past, present, to precision: Contemporary sleep surgery	4:30pm – 6:00pm I Room 109
S48: Insomnia and performance: From school age to workplace	4:30pm – 6:00pm I Rooms 121-122
S49: Advances in the analysis of clinical polysomnography data	4:30pm – 6:00pm I Room 211
S50: Sleep, stroke and vascular dementia	4:30pm – 6:00pm I Rooms 212-214

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[TUESDAY CONTINUED]	
S51: Sleep in space	4:30pm – 6:50pm I Rooms 217-219
O19: Excessive daytime sleepiness and hypersomnia	4:30pm – 6:00pm I Rooms 116-117
O20: Mechanisms and sleep loss	4:30pm – 6:00pm I Rooms 215-216
O21: SBD Measurement	4:30pm – 6:00pm I Room 110
D06: And you thought CPAP adherence was hard: Weight management for patients with obstructive sleep apnea	4:30pm – 6:00pm I Rooms 118-120
Poster session 3	5:30pm – 7:00pm I Exhibition
A12: Australasian Sleep Association (ASA) affiliated symposium	6:30pm – 8:00pm I Room 110
Canadian Sleep Society (CSS) Annual General Membership Meeting	6:30pm – 9:00pm I Room 202
A13: International Hypersomnolence Investigative Group (IHIG)	7.00pm – 9.00pm I Room 110
WEDNESDAY, SEPTEMBER 25, 2019	
K09: Biomarkers and determinants of drowsy driving: Advances in reducing crash risk	8:00am – 8:45am I Ballroom A
K10: Perspectives of neuroimaging in sleep disorders	8:00am – 8:45am I Room 211
S52: State-of-the-art of wearable technology and big data to advance sleep and circadian science	9:00am – 10:30am I Ballroom A
S53: Electronic media and sleep: Where are we and where are we headed?	9:00am – 10:30am I Room 109
S54: Sleep disorders as a risk factor for suicide and the impact of treating insomnia in suicidal patients	9:00am – 10:30am I Rooms 121-122
S55: What is slow-wave activity? And, can we manipulate it to our benefit?	9:00am – 10:30am I Room 211
S56: Obstructive sleep apnea, cognitive dysfunction & neurodegeneration: Current understanding	9:00am – 10:30am I Rooms 212-214
S57: Effects of perinatal sleep modulation in the mother and offspring: Evidences from preclinical research	9:00am – 10:30am I Rooms 215-216
S58: Sleep and memory over the lifespan	9:00am – 10:30am I Rooms 217-219
S59: Shift work in transportation systems	9:00am – 10:30am I Rooms 220-222
O22: Insomnia epidemiology and treatment	9:00am – 10:30am I Rooms 116-117
O23: Cardiometabolic and renal factors	9:00am – 10:30am I Room 110
T11: CPAP compliance around the world (workshop)	9:00am – 10:30pm I Rooms 223-224
D07: Capturing standardized outcome measures for registry based single N RCTs (nRCT=I)	9:00am – 10:30am I Rooms 118-120
Exhibition	10:00am – 4:00pm I Exhibition
S60: New approaches in treating OSA in young subjects	10:45am – 12:15pm I Ballroom A
S61: Why the role of sleep in memory consolidation is overrated	10:45am – 12:15pm I Rooms 118-120
S62: The role of sleep in aging: Molecular insights related to inflammation	10:45am – 12:15pm I Room 109
S63: Biology and biomarkers of unexplained hypersomnolence	10:45am – 12:15pm I Rooms 121-122
S64: The relationship between sleep and torpor: Circuits and mechanisms linking thermoregulation and sleep switch	10:45am – 12:15pm I Room 211
S65: Reconsidering NREM parasomnia: Toward a better understanding of pathophysiology and treatment	10:45am – 12:15pm I Rooms 212-214

[WEDNESDAY CONTINUED]	
S66: Social aspects of sleep	10:45am – 12:15pm I Rooms 215-216
S67: Depression and sleep: New insights in measurement and treatment	10:45am – 12:15pm I Rooms 217-219
S68: On light, circadian rhythms and health	10:45am – 12:15pm I Rooms 220-222
O24: Pediatrics	10:45am – 12:15pm I Rooms 116-117
O25: Pregnancy and SBD	10:45am – 12:15pm I Room 110
T12: Medical ethics (workshop)	10:45am – 11:30am I Rooms 223-224
T13: Dealing with the difficult patient	11:30am – 12:30pm I Rooms 223-224
S69: Is Narcolepsy a spectrum disorder including IH, NT2 and NT1?	12:30pm – 2:00pm Ballroom A
S70: Sleep and mental health in adolescents	12:30pm – 2:00pm I Room 109
S71: Neuroscience and neuroimaging insights into central disorders of hypersomnolence	12:30pm – 2:00pm I Rooms 121-122
S72: Infra-slow oscillations – the keepers of sleep?	12:30pm – 2:00pm I Room 211
S73: Upper airway stimulation therapy for obstructive sleep apnea: Theoretical considerations, clinical evidence, and implementation strategies	12:30pm – 2:00pm I Rooms 212-214
S74: Sleep, mental health, and performance in elite athletes	12:30pm – 2:00pm I Rooms 215-216
S75: Role of sleep and sleep therapies in the pathogenesis and outcomes of neurologic disorders	12:30pm – 2:00pm I Rooms 217-219
S76: The future of assessing fitness to drive in sleep disorders	12:30pm – 2:00pm I Rooms 220-222
D08: Telemedicine in sleep medicine	12:30pm – 2:00pm I Rooms 118-120
K11: Sleep apnea endotypes and phenotypes: Use of new technology in obstructive sleep apnea	2:00pm – 2:45pm I Ballroom A
K12: From somnolence in the general population to narcolepsy	2:00pm – 2:45pm I Room 211
T14: Differential diagnosis	2:00pm – 3:30pm I Room 223-224
S77: Brain iron as a central factor in the pathophysiology of RLS: Emerging evaluation methods and therapeutic opportunities	3:00pm – 4:30pm I Ballroom A
S78: The impact of short and disturbed sleep on pain: New mechanistic insights, sex differences, and clinical implications	3:00pm – 4:30pm I Room 109
S79: Protective and risk factors of treating insomnia in youth	3:00pm – 4:30pm I Rooms 121-122
S80: Functional networks of the sleepy and sleeping brain	3:00pm – 4:30pm I Room 211
S81: Sleep health disparities among children across three continents	3:00pm – 4:30pm I Rooms 212-214
S82: Targeting sleep to improve mental health	3:00pm – 4:30pm I Rooms 215-216
S83: Cluster analysis, biomarkers, and physiologic phenotyping: Towards a precision medicine approach to OSA?	3:00pm – 4:30pm I Rooms 217-219
S84: Sleep & fatigue in healthcare professionals	3:00pm – 4:30pm I Rooms 220-222
O26: Technology	3:00pm – 4:30pm I Rooms 116-117
O27: Young or new investigator awards	3:00pm – 4:30pm I Room 110
D09: Innovative therapies for obstructive sleep apnea care delivery world wide	3:00pm – 4:30pm I Rooms 118-120

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WEDNESDAY CONTINUED]	
T15: Modalities of treatment (workshop)	3:45pm – 5:00pm I Rooms 223-224
S85: Genetics of sleep and its disorders: An update	4:30pm – 6:00pm I Ballroom A
S86: Global perspectives on adolescent sleep and health: Predictors, treatments and policies	4:30pm – 6:00pm I Room 109
S87: REM Sleep Behavior Disorder and REM sleep without atonia across the lifespan	4:30pm – 6:00pm I Rooms 121-122
S88: Neuroscience of dreaming	4:30pm – 6:00pm I Room 211
S89: Is obstructive sleep apnea a primary care disease?	4:30pm – 6:00pm I Rooms 212-214
O28: Narcolepsy	4:30pm – 6:00pm I Rooms 116-117
O29: Neurological sleep disorders	4:30pm – 6:00pm I Rooms 215-216
O30: Pharmacological interventions	4:30pm – 6:00pm I Rooms 217-219
O31: Circadian disorders	4:30pm – 6:00pm I Rooms 220-222
O32: Sleep breathing disorders: Clinical	4:30pm – 6:00pm I Room 110
D10: Sleep medicine in Latin America: Past, present and future	4:30pm – 6:00pm I Rooms 118-120
Closing Ceremony	6:00pm – 7:00pm I Ballroom A

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THE GREAT CANADIAN
SLEEPWALK
THE ROAD TO GOOD NIGHTS

LA GRANDE MARCHE À
DORMIR DEBOUT
EN ROUTE POUR UN SOMMEIL SAIN

Help support the advancement Of Sleep Medicine & Research in Canada

September 22 • 2019

THE GREAT CANADIAN SLEEPWALK

Canadian Sleep Society | Société Canadienne du Sommeil

Vancouver, Canada | 1199 W Cordova St. | 9:30am

Join a team of 'sleepwalkers' in a 5km walk to raise awareness about healthy sleep and raise funds for the Canadian Sleep Society or attend to cheer on the participants.

The meeting point (and finish point) is in the **Grass area beside TAPshack Coal Harbour at 1199 W Cordova St. On-site registration starts at 8:30am.** **A registration fee will need to be purchase to participate.*

To register and for more details visit **css-scs.ca/sleepwalk**.

#CANSleepwalk

clocks & sleep

an Open Access Journal by MDPI

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Clocks & Sleep (ISSN 2624-5175) is an international, scientific, peer-reviewed, open-access journal that investigates a wide range of biological rhythms and sleep related topics and is published quarterly online by MDPI.

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The Hypersomnia Foundation is a nonprofit patient advocacy group dedicated to improving the lives of those with idiopathic hypersomnia (IH) and related disorders.

Please visit our booth at World Sleep 2019 to learn about our patient registry data (1600+ participants) and research grant program. Visit our website to join our provider directory, get our brochure, see our upcoming events, and more.

www.hypersomniafoundation.org

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C01 Pediatric sleep

8:00am – 4:00pm I Room 214

Chairs:
Reut Gruber (Canada); Oliviero Bruni (Italy)

8:00am - 8:10am
Introduction
Reut Gruber (Canada); Oliviero Bruni (Italy)

8:10am - 8:50am
Insomnia in infants and children
Judith Owens (United States)

8:50am - 9:30am
Insomnia & DSPS in adolescence
Reut Gruber (Canada); Daniel Lewin (United States)

9:30am - 9:50am
Coffee break

9:50am - 10:30am
SDB and OSA Part 1 – Clinical presentation, assessment, epidemiology, evaluation
Eliot Katz (United States)

10:30am - 11:10am
SDB and OSA Part 2 – Treatment- surgical interventions, CPAP, oral appliances, positional therapy, weight loss
Sherri Lynn Katz (Canada)

11:10am - 11:50am
Parasomnias
Shelly Weiss (Canada)

11:50am - 12:30pm
Pediatric Narcolepsy and other hypersomnia
Michel Lecendreux (France)

12.30pm - 1:30pm
Lunch break

1.30pm - 2:10pm
Movement disorders – RLS PLMD Rhythmic movement disorder
Oliviero Bruni (Italy)

2.10pm - 2:50pm
Sleep and mood, anxiety, PTSD, ADHD and other psychiatric disorders
Anna Ivanenko (United States)

2:50pm - 3:10pm
Break

3:10pm - 4:00pm
Panel discussion, Q and A
Reut Gruber (Canada); Oliviero Bruni (Italy); Judith Owens (United States); Daniel Lewin (United States); Eliot Katz (United States); Sherri Lynn Katz (Canada) Shelly Weiss (Canada); Michel Lecendreux (France); Anna Ivanenko (United States)

C02 Obstructive sleep apnea: Diagnosis and management

8:00am – 5:00pm I Rooms 220-222

Chairs:
Allan Pack (United States); Danny Eckert (Australia)

8:00am - 8:05am
Introduction and welcome
Allan Pack (United States); Danny Eckert (Australia)

8:05am - 8:35am
Update on OSA epidemiology
Naresh Punjabi (United States)

8:35am - 9:05am
Anatomical phenotypes
Richard Schwab (United States)

9:05am - 9:35am
Muscles of the upper airway, contribution to OSA pathophysiology
Jayne Carberry (Australia)

9:35am - 10:05am
An update on physiological risk factors and their assessments
Ali Azarbarzin (United States)

10:05am - 10:15am
Coffee break

10:15am - 10:45am
Different clinical subtypes
Allan Pack (United States)

10:45am - 11:15am
Different physiological subtypes
Andrey Zinchuk (United States)

11:15am - 11:45am
New approaches to PSG analysis
Diego Mazzotti (United States)

11:45am - 12:45pm
Lunch break

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12:45pm - 1:15pm
Potential role of primary care physicians
Manuel Sánchez-de-la-Torre (Spain)

1:15pm - 1:45pm
A comprehensive strategy based on telemedicine
Samuel T. Kuna (United States)

1:45pm - 2:15pm
Update on consumer sleep technologies
Nathaniel Watson (United States)

2:15pm - 2:45pm
Doing it better for less
Neil Freedman (United States)

2:45pm - 3:00pm
Break

3:00pm - 3:30pm
Update on CPAP
Susheel Patil (United States)

3:30pm - 4:00pm
Oral appliances
Peter Cistulli (Australia)

4:00pm - 4:30pm
Hypoglossal nerve stimulation
Patrick Strollo (United States)

4:30pm - 5:00pm
Pharmacotherapy for OSA
Luigi Taranto Montemurro (United States)

C05 Recent advances in RLS treatment

8:00am – 12:00pm I Room 122

Chairs:
Richard Allen (United States); Diego García-Borreguero (Spain)

8:00am - 8:05am
Introduction
Richard Allen (United States); Diego García-Borreguero (Spain)

Opioids

8:05am - 8:35am
Biological differences of opiods: Low abuse potential of methadone
Sergi Ferre (United States)

8:35am - 9:15am
USA Clinical guidelines/experience with opioid use in RLS
Christopher Earley (United States)

9:15am - 9:55am
European guidelines/experience with opioid use in RLS including oxycodone/naloxone
Birgit Högl (Austria)

Iron

9:55am - 10:40am
IV iron: Choices, advantages and limitations
Richard Allen (United States)

Experimental Treatments: Rationale and clinical experience

10:40am - 11:20am
Adenosine
Diego García-Borreguero (Spain)

11:20am - 11:40am
Cannabinoid/Cannabis
Imad Ghorayeb (France)

11:40am - 12:00pm
Discussion – Questions to speakers
Richard Allen (United States); Diego García-Borreguero (Spain); Sergi Ferre (United States); Christopher Earley (United States); Birgit Högl (Austria); Imad Ghorayeb (France)

C06 Polysomnographic measurements during sleep, beyond the AHI

8:00am – 12:00pm I Room 224

Chairs:
Erna Sif Arnardottir (Iceland); Kerri Melehan (Australia)

8.00am - 8:10am
Introduction
Erna Sif Arnardottir (Iceland); Kerri Melehan (Australia)

8:10am - 8:45am
Dynamic Scoring & EEG analysis
Magdy Younes (Canada)

8:45am - 9:20am
Cardiopulmonary coupling
Robert Thomas (United States)

9:20am - 9:40am
Coffee break

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

9:40am - 10:15am
Gaining more insight from the flow signal
Erna Sif Arnardottir (Iceland)

10:15am - 10:50am
Getting more out of oximetry
Kerri Melehan (Australia)

10:50am - 11:25am
Future advances in sleep monitoring
Walter McNicolas (Ireland)

11:25am - 12:00pm
Conclusion / Question and answer
Erna Sif Arnardottir (Iceland); Kerri Melehan (Australia)

C07 Circadian clinical science

8:00am – 12:00pm I Rooms 118-120

Chairs:
Phyllis Zee (United States); Leon Lack (Australia)

8:00am - 8:10am
Introduction
Phyllis Zee (United States)

8:10am - 8:40am
Regulation of circadian rhythms: Implications for health
Phyllis Zee (United States)

8:40am - 9:10am
Consequences of living against the clock and social jet lag
Till Roenneberg (Germany)

9:10am - 9:40am
Circadian rhythms and mental health
Kathleen Merikangas (United States)

9:40am - 10:00am
Coffee break

10:00am - 10:30am
Novel insights of etiology and pathophysiology of circadian rhythm sleep-wake disorders
Gorica Micic (Australia)

10:30am - 11:00am
New insights in the treatment of circadian rhythm sleep-wake disorders
Leon Lack (Australia)

11:00am - 11:40am
Challenging circadian rhythm sleep-wake disorders
Robert Thomas (United States)

11:40am - 12:00pm
Conclusion / Question and answer
Phyllis Zee (United States); Leon Lack (Australia)

A01 Sleep disorders primary care education course

8:00am – 4:50pm I Room 109

Chairs:
James Lee (Canada); Célyne H. Bastien (Canada); Najib Ayas (Canada)

8:00am - 8:10am
Introduction

Sleep physiology 101: Introduction to sleep

8:10am - 8:32am
What is sleep, what are sleep stages, and why do we sleep?
Célyne H. Bastien (Canada)

8:32am - 8:55am
Normal sleep across the lifespan
Julie Carrier (Canada)

"I can't sleep." Insomnia in primary care

8:55am - 9:21am
What's the cause? Understanding when you are dealing with different causes of insomnia
Rob Comey (Canada)

9:21am - 9:47am
Essential principles of cognitive behavioral therapies for insomnia (CBT-I) in primary care
Charles Morin (Canada)

9:47am - 10:02am
Coffee break

10:02am - 10:28am
Pediatric insomnia including delayed sleep-wake phase in adolescents
Shelly Weiss (Canada)

10:28am - 10:54am
What drugs should I use for sleep? Pharmaceutical management of insomnia including cannabis and melatonin
Ram Randawa (Canada)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

10:54am - 11:20am
How to treat insomnia with comorbidities: A primary care approach (insomnia in medical and affective disorders)
Dieter Riemann (Germany)

11:20am - 11:46am
When the clock is out of whack. Shiftworking and Jetlag- consequences and management
Diane Boivin (Canada)

11:46am - 12:26pm
Lunch break

Breathing deeply or not: Sleep-Disordered Breathing in primary care

12:26pm - 12:52pm
Adult obstructive sleep apnea: Diagnosis and treatment from a local perspective
John Fleetham (Canada)

12:52pm - 1:18pm
Adult OSA- a ticking time bomb for cardiometabolic disease?
Sanjay R. Patel (United States)

1:18pm - 1:44pm
"I can't stand CPAP." How to improve CPAP adherence and alternatives to CPAP
Frank Ryan (Canada)

1:44pm - 2:10pm
Children can get sleep apnea too. Pediatric sleep-disordered breathing in primary care
Rakesh Bhattacharjee (United States)

2:10pm - 2:26pm
Break

Other things that go bump in the night

2:26pm - 2:52pm
Restless legs syndrome
Diego García-Borreguero (Spain)

2:52pm - 3:18pm
The role of sleep in Chronic Fatigue Syndrome and Fibromyalgia
Richard Arseneau (Canada)

3:18pm - 3:44pm
Effects of substance abuse on sleep
Launette Rieb (Canada)

3:44pm - 4:10pm
Let sleeping infants lie: Addressing the concerns of caregivers
Keyvan Hadad (Canada)

4:10pm - 4:36pm
Pediatric potpourri: Hypersomnia, parasomnia and others
James Lee (Canada)

4:36pm - 4:50pm
Conclusion

A02 Sleep-circadian biomarkers workshop

8:00am – 11:45am I Rooms 217-219

Chairs:
Janet Mullington (United States); Eilis Boudreau (United States)

8:00am - 8:10am
Introduction
Janet Mullington (United States)

8:10am - 8:50am
Consortia models for tech-transfer of biomarkers
Joseph Menetski (United States)

8:50am - 8:55am
Introduction to panel objectives
Janet Mullington (United States)

8:55am - 9:00am
Panel Breakout 1: Extreme cases to inform fitness for duty, sleep sufficiency
Clare Anderson (Australia); Simon Archer (United Kingdom); Monika Haack (United States); Hans van Dongen (United States)

9:00am - 9:05am
Panel Breakout 2: The circadian use cases
Jeanne Duffy (United States); Phyllis Zee (United States); Kenneth Wright (United States)

9:50am - 9:10am
Panel Breakout 3: Data analysis expertise – trials and tribulations
Raymond Ng (Canada); Emma Laing (United Kingdom)

9:10am - 9:15am
Panel Breakout 4: IP – How to navigate your sources of support
Joseph Menetski (United States); Derk-Jan Dijk (United Kingdom); Allan Pack (United States)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

9:15am - 10:15am
Panel breakout sessions

10:15am - 10:30am
Break

10:30am - 11:30am
Panel synopsis presentations
Clare Anderson (Australia); Jeanne Duffy (United States); Joseph Menetski (United States)

11:30am - 11:45am
Summary statements

C17 Dental sleep medicine (part 1)

8:30pm – 5.00pm I Room 211

Chairs:
Fernanda Almeida (Canada)

8:30am - 8:40am
Welcome
Fernanda Almeida (Canada)

8:40am - 9:10am
Treatment of mild OSA, should I bother treating it?
Raphael Heinzer (Switzerland)

9:10am - 9:40am
CV consequences of OSA, can we rely on PSG data, biomarkers or symptoms?
Sanjay R. Patel (United States)

9:40am - 10:10am
Impact of oral appliance on CV and diabetes
Tea Galic (Croatia)

10:10am - 10:30am
Coffee break

10:30am - 11:00am
Oral appliance in edentulous and almost edentulous patients
Marc Braem (Belgium)

11:00am - 11:30am
Pregnancy and impact of OSA, can we use oral appliances?
Sushmita Pamidi (Canada)

11:30am - 12:00pm
Pediatric OSA and craniofacial characteristics – findings of the PDSA trial
Benjamin Pliska (Canada)

12:00pm - 12:30pm
History of oral appliance therapy
Gail Demko (United States)

12:30pm - 1:30pm
Lunch break

1:30pm - 2:00pm
Mean Disease alleviation and compliance
Kate Sutherland (Australia)

2:00pm - 2:30pm
Predictors of oral appliance therapy, are the answers all on the upper airway
Peter Cistulli (Australia)

2:30pm - 3:00pm
Patient management before and after OA insertion
John Tucker (United States)

3:00pm - 3:30pm
Break

3:30pm - 4:00pm
Periodontal disease as a comorbidity or side effects on oral appliance therapy
Fernanda Almeida (Canada)

4:00pm - 4:30pm
Evaluating and applying the evidence around oral appliance therapy
Leslie Dort (Canada)

4:30pm - 5:00pm
The past and the future of DSM, get your questions answered by Alan Lowe
Alan Lowe (Canada)

C08 Staging and scoring

1:00pm – 5:00pm I Rooms 215-216

Chairs:
Thomas Penzel (Germany)

1:00pm - 1:45pm
Reviewing tricky AASM rules for scoring sleep stages & arousals
Amr Obeidat (United States)

1:45pm - 2:15pm
Group scoring session and cases discussion
Amr Obeidat (United States)

2:15pm - 2:45pm
Reviewing AASM rules for respiratory events
Amr Obeidat (United States)

2:45pm - 3:15pm
Break

Continued on page 43

Sleep Expo 2019: Understanding Narcolepsy and Hypersomnia: Insights and perspectives

8:30am – 4:30pm I Rooms 116 -117

8:30am - 9:00am
Registration and coffee

9:00am - 9:15am
Welcome & introduction
Claire Crisp (United Kingdom); Diane Powell (United States)

9:15am - 10:00am
Current research in excessive sleepiness disorders
Yves Dauvilliers (France)

10:00am - 10:15am
Coffee break

10:15am - 11:00am
What sleepy mice tell us about sleepy people
Thomas Scammell (United States)

11:00am - 11:45am
Transitional care: The journey from childhood to adulthood
Brian Murray (Canada)

11:45am - 12:30am
Lunch break

12:30pm - 1:15pm
Living with narcolepsy
Kelsey Biddle (United States)

1:15pm - 2:30pm
Managing depression associated with excessive sleepiness
Indra Narang (Canada)

2:30pm - 3:15pm
Non-pharmacologic strategies to manage excessive sleepiness disorders
Shelly Weiss (Canada)

3:15pm - 3:30pm
Break

3:30pm - 4:30pm
Panel discussion
Claire Crisp (United Kingdom); Thomas Scammell (United States); Yves Dauvilliers (France); Brian Murray (Canada); Kelsey Biddle (United States); Indra Narang (Canada); Shelly Weiss (Canada)

Sleep Expo 2019: Vigilance & Wake-A-Thon: How to promote sleep and injury prevention

9:00am – 12:30pm I Room 110

Chair:
Osman Ipsiroglu (Canada)

9:00am - 9:03am
Occupational injuries & "alcohol intoxication = sleep deprivation"

9:03am - 9:18am
Sleep deprivation: The perspective from the emergency room and sleep medicine
Najib Ayas (Canada)

9:18am - 9:21am
Athletic injuries & concussion

9:21am - 9:36am
Active and safe: The BC injury prevention campaign
Sarah Richmond (Canada)

9:36am - 9:38am
Introduction by chair

9:38am - 9:53am
From sleep deprivation to vigilance: A new communications concept?
Gerhard Kloesch (Austria)

9:53am - 10:09am
Student presentation: Communication of sleep health via vigilance games & scientific background of the games
Renee Boldut (Canada); Ruth Liu (Canada) Gemma Tomasky (Canada); Monica Hsu (Canada)

10:09am - 10:15am
General Discussion

10:15am - 10:45am
Break

10:45am - 10:47am
Introduction by chair

10:47am - 11:02am
Youth, sleep and drugs: Vigilance fluctuations
Pierre Philip (France)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

11:02am - 11:10am
Risk-taking-behaviors: What can we learn from children?
Mariana Brussoni (Canada)

11:10am - 12:30pm
Round-table: Do we need a new communications concept for messaging the importance of sleep & negative aspects of sleep deprivation?
Dan Small (France); Samantha Pritchard (Canada); Calvin Kuo (Canada); Angelika Schlarb (Germany); Pierre Philip (France); Najib Ayas (Canada); Gerhard Kloesch (Austria); Sarah A. Richmond (Canada)

3:15pm - 3:45pm
Group scoring and cases discussion
Amr Obeidat (United States)

3:45pm - 4:15pm
AASM for scoring LMs
Amr Obeidat (United States)

4:15pm - 5:00pm
Group scoring and cases discussion
Amr Obeidat (United States)

C09 Portable devices for clinical practice and sleep research

1:00pm – 5:00pm I Room 122

Chairs:
Max Hirshkowitz (United States); Thomas Penzel (Germany)

1:00pm 1:10pm
Introduction

1:10pm - 1:50pm
Using actigraphy for sleep research (The Sleep Genome Project)
Till Roenneberg (Germany)

1:50pm - 2:30pm
Using non-polysomnographic technologies to diagnose sleep disordered breathing
Thomas Penzel (Germany)

2:30pm - 3:10pm
Using AutoPAP to determine therapeutic positive pressures
Amir Sharafkhaneh (United States)

3:10pm - 3:30pm
Break

3:30pm - 4:10pm
Sleep apnea treatment follow up: Technology, schedule, and rescue
Samuel Kuna (United States)

4:10pm - 4:50pm
ANSI/CTA (American National Standards Institute / Consumer Technology Association) Standards for wearables and in-bedroom sleep trackers
Max Hirshkowitz (United States)

4:50pm - 5:00pm
Conclusion / Question and answer

C10 Circadian basic science: Human circadian rhythms from OMICS to behavior

1:00pm – 5:00pm I Rooms 118-120

Chairs:
Kenneth Wright (United States); Derk-Jan Dijk (United Kingdom)

1:00pm - 1:10pm
Introduction
Kenneth Wright (United States)

1:10pm - 1:50pm
Recent advances in photic and non-photic entrainment and treatment of circadian disorders
Christian Cajochen (Switzerland)

1:50pm - 2:30pm
Aging effects on circadian rhythms and circadian rhythm sleep wake-disorders
Jeanne Duffy (United States)

2:30pm - 2:50pm
Coffee break

2:50pm - 3:30pm
The human blood transcriptome as a window on circadian and sleep-wake status
Derk-Jan Dijk (United Kingdom)

3:30pm - 4:10pm
What's behind the curtains of shift workers maladaptation?
Diane Boivin (Canada)

4:10pm - 4:50pm
Circadian rhythms, metabolism, and cancer from omics to physiology
Kenneth Wright (United States)

4:50pm - 5:00pm
Conclusion / Question and answer
Derk-Jan Dijk (United Kingdom)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

C15 Parasomnia

1:00pm – 5:00pm I Room 224

Chairs:
Aleksandar Videnovic (United States); Rosalia Silvestri (Italy)

1:00pm - 1:10pm
Introduction
Rosalia Silvestri (Italy); Aleksandar Videnovic (United States)

1:10pm - 1:50pm
Neurobiological mechanisms of parasomnias – from pattern generators to sleep state dissociations
Rosalia Silvestri (Italy)

1:50pm - 2:30pm
NREM parasomnias: Disorders of arousal across the lifespan
Rosalia Silvestri (Italy)

2:30pm - 2:50pm
Coffee break

2:50pm - 3:30pm
REM sleep behavior disorder: Epidemiology, clinical and PSG features
Ambra Stefani (Austria)

3:30pm - 4:10pm
RBD: On the intersection of sleep, neurology and neuroscience
Aleksandar Videnovic (United States)

4:10pm - 4:50pm
Immune disorders and parasomnias
Erik K. St. Louis (United States)

4:50pm - 5:00pm
Conclusion / Question and answer
Aleksandar Videnovic (United States); Rosalia Silvestri (Italy)

C03 Sleep health in women

8:00am – 4:00pm I Rooms 220-222

Chairs:
Ghada Bourjeily (United States); Yu Sun Bin (Australia)
Danielle Wilson (Australia)

8:00am - 8:10am
Introduction
Ghada Bourjeily (United States)

8:10 - 8:40am
Social contributions to sleep in women
Yu Sun Bin (Australia)

8:40am - 9:10am
Insomnia in women
Hrayr Attarian (United States)

9:10am - 9:40am
Women, circadian rhythms and shift work
Diane Boivin (Canada)

9:40am - 10:10am
Normal sleep and insomnia in pregnancy
Lianne Tomfohr-Maden (Canada)

10:10am - 10:40am
Coffee break

10:40am - 11:10am
Sleep disordered breathing and perinatal outcomes
Danielle Wilson (Australia)

11:10am - 11:40am
Making sense of associations between sleep disturbances and perinatal outcomes
Margaret Bublitz (United States)

11:40am - 12:10pm
Treating pregnant women with sleep disorders
Ghada Bourjeily (United States)

12:10pm - 1:10pm
Lunch break

1:10pm - 1:40pm
Sleep and mental health in women
Laura Palagini (Italy)

1:40pm - 2:10pm
Sleep and cardiovascular consequences in women
Reena Mehra (United States)

2:10pm - 2:40pm
Sleep and menopause
Helena Hachul (Brazil)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

2:40pm - 3:00pm
Break

3:00pm - 3:30pm
Restless legs syndrome/Willis Ekbom disease in women
Mauro Manconi (Switzerland)

3:30pm - 4:00pm
Sleep, circadian rhythms and fatigue in cancer
Sonia Ancoli-Israel (United States)

C04 Year in review

8:00am – 5:00pm I Room 214

Chairs:
Robert Thomas (United States); Liborio Parrino (Italy)

8:00am - 8:10am
Introduction
Robert Thomas (United States)

8:10am - 8:50am
New look at old data: Machine learning and other analyses
Robert Thomas (United States)

8:50am - 9:30am
Update on obstructive sleep apnea
Allan Pack (United States)

9:30am - 10:10am
Brain aging, sleep, neurodegeneration
Catherine McCall (United States)

10:10am - 10:30am
Coffee break

10:30am - 11:20am
From the circadian world
Sabra Abbott (United States)

11:20am - 12:00pm
Sleep-related eating: Causes, consequences, and treatments
John Winkelman (United States)

12:00pm - 1:00pm
Lunch break

1:00pm - 1:50pm
Neurocircuitry: Methods and updates
Antoine Adamantidis (Switzerland)

1:50pm - 2:30pm
Sleep and cancer
Nathaniel Watson (United States)

2:30pm - 2:50pm
Break

2:50pm - 3:30pm
Parasomnia and epilepsy
Marco Zucconi (Italy)

3:30pm - 4:10pm
Sleep and pain
Gilles Lavigne (Canada)

4:10pm - 4:50pm
Insomnia
Liborio Parrino (Italy)

4:50pm - 5:00pm
Conclusion / Question and answer
Liborio Parrino (Italy)

C11 Insomnia disorder: Assessment, diagnosis and management (part 1)

8:00am – 12:00pm I Rooms 118-120

Chairs:
Ruth M. Benca (United States); Jason Ellis (United Kingdom)

8:00am - 8:10am
Introduction

8:10am - 8:55am
What is insomnia?
Jason Ellis (United Kingdom)

8:55am - 9:40am
Assessment of insomnia: The sleep diary and beyond
Sean Drummond (Australia)

9:40am - 10:00am
Coffee break

10:00am - 10:45am
Treatment options for insomnia: Pharmacotherapy
Dalva Poyares (Brazil)

10:45am - 11:30am
Treatment options for insomnia: Non-Pharmacological approaches
Anne Germain (United States)

11:30am - 12:00pm
Conclusion / Question and answer

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

C12 Aging, neurodegeneration and sleep

8:00am – 12:00pm I Rooms 215-216

Chairs:
Marco Zucconi (Italy); Birgit Högl (Austria)

8:00am - 8:10am
Introduction
Marco Zucconi (Italy); Birgit Högl (Austria)

8:10am - 8:45am
Sleep and the aging brain
Sonia Ancoli-Israel (United States)

8:45am - 9:20am
Is macro and microstructure alteration of sleep a risk for neurodegeneration?
Liborio Parrino (Italy)

9:20am - 9:40am
Coffee break

9:40am - 10:15am
PLMS and sleep apnea: Are they a sign of neurodegeneration in the aging brain?
Marco Zucconi (Italy)

10:15pm - 10:50pm
Sleep and risk factor for AD and taupathies
Madeleine Grigg-Damberger (United States)

10:50am - 11:25am
Sleep and alpha synucleinopaties
Birgit Högl (Austria)

11:25am - 12:00pm
Conclusion & discussion

C13 Cardiovascular and renal consequences of sleep apnea

8:00am – 12:00pm I Room 110

Chairs:
Luciano Drager (Brazil); Craig Phillips (Australia)

8:00am - 8:10am
Introduction
Luciano Drager (Brazil); Craig Phillips (Australia)

8:10am - 8:40am
Pathophysiology of CVD in OSA
Virend Somers (United States)

8:40am - 9:10am
Hypertension and Resistant Hypertension in OSA (epidemiology and RCT results)
Manuel Sánchez-de-la-Torre (Spain)

9:10am - 9:40am
Coronary and Carotid Artery Disease (epidemiology and intervention results)
Yuksel Peker (Turkey)

9:40am - 10:00am
Coffee break

10:00am - 10:30am
Arrhythmias (epidemiology and OSA intervention results)
Reena Mehra (United States)

10:30am - 11:00am
Kidney Disease (mechanisms and intervention studies)
Patrick Hanly (Canada)

11:00am - 11:30am
Cerebrovascular disease and stroke
Najib Ayas (Canada)

11:30am - 12:00pm
Lessons from the large trials
Susan Redline (United States)

Technologist program: AAST

8:00am – 4:45pm I Room 224

Chair:
Michael Eden (United States)

8:00am - 8:05am
Introduction

8:05am - 9:00am
Evolution of cardiopulmonary resuscitation
David Wolfe (United States)

9:00am - 9:50am
Sleep and athletes: Performance and recovery considerations
Brendan Duffy (United States)

9:50am - 10:20am
Cardiac recognition
David Wolfe (United States)

10:20am - 10:40am
Coffee break

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

10:40am - 11:10am
Recognizing abnormal EEG activity during sleep
Marietta Bibbs (United States)

11:10am - 12:10am
Medical mysteries
Julie Dewitte (United States)

12:10am - 12:15pm
General questions morning session
Michael Eden (United States)

12:15pm - 1:15pm
Lunch break

1:15pm - 1:45pm
Year in review
Joel Porquez (United States)

1:45pm - 2:30pm
Dental sleep medicine
Leslie Dort (Canada)

2:30pm - 3:00pm
AASM scoring manual

3:00pm - 3:20pm
Break

3:20pm - 3:50pm
New technologies in sleep medicine
Brendan Duffy (United States)

3:50pm - 4:30pm
Equipment overview and scoring software
Amr Obeidat (United States)

4:30pm - 4:45pm
General questions afternoon session
Michael Eden (United States)

A03: International Restless Legs Syndrome Study Group annual meeting & course

8:00am – 9:00pm I Rooms 116-117

Program Committee:
Denise Sharon (USA); Federica Provini (Italy); Garima Shukla (Canada); Rochelle Zak (United States); Cornelius Bachman (Germany)

8:00am - 8:30am
Networking and coffee
Denise Sharon (United States); Garima Shukla (Canada); Rochelle Zak (United States); Cornelius Bachman (Germany)

8:30am - 8:45am
Welcome to Vancouver & introductions
Denise Sharon (United States); Allan O'Bryan (United States)

Animal models task force
Mauro Manconi (Switzerland); Diego García-Borreguero (Spain)

8:45am - 9:00am
Critical review of outcome measures of the past models: Rationale and need of consensus
Mauro Manconi (Switzerland)

9:00am - 9:15am
Expert consensus guideline for an animal model of RLS: How to reach a consensus on outcome measures in animal models: Methods and preliminary results
Aaro Salminen (Germany)

9:15am - 9:30am
Update on RLS animal models and iron
Richard Allen (United States)

9:30am - 9:45am
State of the research on animal model KO for BTBD9
Yuqing Li (United States)

9:45am - 10:00am
Animals models task force summary and update
Mauro Manconi (Switzerland)

10:00am - 10:15am
Coffee break

RLS and PLM Update
Cornelius Bachman (Germany)

10:15am - 10:35am
RLS: Leg movements identify arousal
Richard Allen (United States)

10:35am - 10:50am
Preclinical validation of brain iron deficiency as the main initial pathogenetic mechanism in RLS
Sergi Ferre (United States)

10:50am - 11:10am
Update on blood pressure and endothelial dysfunction in RLS
Yves Dauvilliers (France)

11:10am - 11:30am
New MRI findings in RLS
Ambra Stefani (Austria)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

11:30am - 11:45am
A proteomic and system biology approach reveal novel biomarker signatures for RLS
Raffaele Ferri (Italy)

11:45am - 12:00pm
The lifespan course of short-interval, periodic and isolated leg movements during sleep
Raffaele Ferri (Italy)

12:00am - 1:00pm
Lunch break

Neurologic co-morbidities of RLS
Rochelle Zak (United States)

1:00pm - 1:03pm
Introduction
Garima Shukla (Canada)

1:03pm - 1:23pm
Restless legs syndrome and Parkinson's disease – the dopaminergic connection and treatment challenges
Luigi Ferini-Strambi (Italy)

1:23pm - 1:40pm
Restless legs syndrome in acute neurological conditions – lessons from stroke and acute neuropathies
Garima Shukla (Canada)

1:40pm - 2:00pm
How RLS contributes to quality of life in Multiple Sclerosis
Mauro Manconi (Switzerland)

Young Investigator Committee
Arthur Walters (United States); Denise Sharon (United States); Rochelle Zak (United States); John Winkelman (United States)

2:00pm - 2:15pm
Young Investigator Presentation: Periodic limb movement during sleep and the incidence of cardiometabolic outcomes: the HypnoLaus study
Camila Hirotsu (Switzerland)

2:15pm - 2:30pm
Young Investigator Presentation: Evaluation of brain iron deposits in restless legs syndrome: The promising role of transcranial sonography
Celia Garcia Malo (Spain)

2:30pm - 2:45pm
Young Investigator Presentation: Are there correlation among: RLS, iron and IL6 in runners?
Sayonara Fagundes (Brazil)

2:45pm - 3:00pm
Young Investigator Presentation: Transcranial Sonography as a novel neuroimaging tool to determine brain iron deficiency in restless legs syndrome: Results in a Chilean sample
Vivian Wanner (Chile)

3:00pm - 3:15pm
Break

IRLSSG Projects
Denise Sharon (United States)

3:15pm - 3:30pm
Diagnostic accuracy of RLS screening tools
Stephany Fulda (Switzerland)

3:30pm - 3:45pm
Update on PLMS scoring program certification
Stephany Fulda (Switzerland)

3:45pm - 4:00pm
National RLS Opioid Registry: 1-2 Year longitudinal results
John Winkelman (United States)

4:00pm - 4:15pm
Establishing RSD as a new diagnosis
Lourdes DelRosso (United States)

4:15pm - 4:30pm
RLS1 Video recordings and pictograms in children and adolescents with RLS
Osman Ipsiroglu (Canada)

4:30pm - 4:45pm
Pediatric RLS and GP Task Force update
Arthur Walters (United States)

4:45pm - 4:50pm
Ideas for projects from the attendees

4:50pm - 5:00pm
Outgoing Chair: Summary
Diego García-Borreguero (Spain)

5:00pm - 5:15pm
Break

5:15pm - 6:00pm
Business meeting
Diego García-Borreguero (Spain)

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

A04: Sleep-circadian informatics data harmonization

8:00am – 11:45am I Rooms 217-219

Chairs:
Eilis Boudreau (United States); Janet Mullington (United States)

8:00am - 8:10am
Introduction
Eilis Boudreau (United States)

8:10am - 8:50am
Translational informatics, development of ontologies, and data sharing
Melissa Haendel (United States)

8:50am - 8:55am
Introduction to Panel Objectives
Eilis Boudreau (United States)

8:55am - 9:00am
Panel Breakout 1: Questionnaires
Daniel J. Buysse (United States)

9:00am - 9:05am
Panel Breakout 2: Actigraphy
Till Roenneberg (Germany)

9:05am - 9:10am
Panel Breakout 3: PSG
Thomas Penzel (Germany)

9:10am - 9:15am
Panel Breakout 4: Infrastructure models and opportunities
Shaun Purcell (United States)

9:15am - 10:15am
Panel Breakout Sessions

10:15am - 10:30am
Break

10:30am - 11:30am
Panel Synopsis Presentations
Daniel J. Buysse (United States); Till Roenneberg (Germany); Thomas Penzel (Germany); Shaun Purcell (United States); Kathleen Merikangas (United States)

11:30am - 11:45am
Summary statements

C17 Dental sleep medicine (part 2)

8:30am – 12:50pm I Room 211

Chairs:
Fernanda Almeida (Canada); Leslie Dort (Canada)

Alternative, emerging and combination therapies

8:30am - 8:50am
Phenotyping and its relevance to dental sleep medicine
Danny Eckert (Australia)

8:50am - 9:10am
Oral appliance and oxygen therapy: Distinct or complimentary interventions?
Scott Sands (United States)

9:10am - 9:30am
Cannabis, bruxism and OSA, where is the smoke?
Gilles Lavigne (Canada)

9:30am - 9:50am
CPAP, position training and other combination therapies to OAT
Marijke Dieltjens (Belgium)

9:50am - 10:20am
Discussion Panel: The pros and cons of combination therapy
Fernanda Almeida (Canada); Danny Eckert (Australia); Scott Sands (United States); Gilles Lavigne (Canada); Marijke Dieltjens (Belgium)

10:20am - 10:40am
Coffee break

The latest questions on oral appliance therapy

10:40am - 11:00am
Bruxism and OSA, association or causality? How to treat?
Ramesh Balasubramaniam (Australia)

11:00am - 11:20am
Titration – is just a little too little?
Satoru Tsuiki (Japan)

11:20am - 11:50am
Status of bite changes and management
Julia Cohen-Levy (France)

11:50am - 12:10pm
Long term effectiveness of OAT
Marie Marklund (Sweden)

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Available at worldsleepcongress.com/register.

12:10am - 12:50pm
Panel Discussion: Get your clinical question addressed by a researcher
Leslie Dort (Canada); Ramesh Balasubramaniam (Australia); Satoru Tsuiki (Japan); Julia Cohen-Levy (France); Marie Marklund (Sweden)

A05: The CCS/CIHR-ICRH Trainee Research Day
8:50am – 4:00pm I Room 122

8:50am - 9:00am
Welcome and opening remarks
Sara Pintwala (Canada)

Advocating science: Foundations, translation and application

9:00am - 10:00am
Keynote Address: Astrocyte and microglia responses to sleep loss
Kazue Semba (Canada)

10:00am - 10:15am
Break

10:15am - 11:15am
Answers that matter: A focus on knowledge translation in sleep science. Will there ever be pharmacotherapy for obstructive sleep apnea?
Andrew Wellman (United States)

11:15am - 11:20am
Introduction to session
Sara Pintwala (Canada)

11:20am - 11:30am
Overview of trainee funding opportunities
Jonathan Charest (Canada)

11:30am - 12:00pm
"Inside the mind" of the CIHR
Ryan Perry (Canada)

12:00pm - 12:30pm
Lunch break

12:30pm - 1:30pm
Lunch and learn: Graduate studies and career pathways
Christina Whiteus (United States); Lee Tunstall (Canada)

Afternoon session: Focus on students

1:30pm - 2:30pm
Trainee symposium
Srikanth Chowdhury (Bangladesh); Thierry Provencher (Canada); HanHee Lee (Canada)

2:30pm - 4:00pm
Social mixer and data blitz

World Narcolepsy Day Facebook Live Event
9:00am – 10:15am I Room 201

The Great Canadian Sleepwalk: The road to good nights
9:30am – 11:00am I Coal Harbour

Join a team of 'sleepwalkers' in a 5km walk to raise awareness about healthy sleep and raise funds for the Canadian Sleep Society or attend to cheer on the participants. The meeting point (and finish point) is in the Grass area beside TAPshack Coal Harbour at 1199 W Cordova St. On-site registration starts at 8:30am. Visit the-great-canadian-sleepwalk-2019 for details.
**A registration fee will need to be purchased to participate.*

C14 Insomnia disorder: Assessment, diagnosis and management (part 2)
12:45pm – 4:00pm I Rooms 118-120

Chairs:
Jason Ellis (United Kingdom); Ruth Benca (United States)

12:45pm - 12:55pm
Introduction

12:55pm - 1:25pm
Intensive sleep retraining
Leon Lack (Australia)

1:25pm - 1:55pm
Treating insomnia in psychiatric disorders
Ruth Benca (United States)

1:55pm - 2:25pm
Treating insomnia in chronic pain conditions
Michael Smith (United States)

2:35pm - 2:45pm
Coffee break

2:45pm - 3:15pm
Precision medicine for insomnia
Célyne Bastien (Canada)

3:15pm - 3:45pm
Where next with the treatment of insomnia?
Daniel Buysse (United States)

3:45pm - 4:00pm
Conclusion / Question and answer

Sleep Expo 2019: Public Lecture Series

9:30am – 6:30pm | Room 109

9:30am - 10:00am
How to know if you have a sleep disorder
Steve Carstensen (United States); Carrie Magnuson (United States)

10:00am - 10:30am
Women and sleep: Pregnancy to menopause
Melissa C. Lipford (United States)

10:30am - 11:00am
Insomnia treatment and therapy options
Paul Glovinsky (United States)

11:00am - 11:30am
My child can't sleep: Managing sleep disorders in infants to adolescents
Lourdes DelRosso (United States)

11:30am - 12:00pm
Parkinson's, dementia, and the elderly
Phyllis Zee (United States)

12:00pm - 12:30pm
Break

12:30pm - 1:00pm
Sleep, insomnia, and depression
Charles Morin (Canada)

1:00pm - 1:30pm
Why do I keep falling asleep? Narcolepsy management
Michael Thorpy (United States)

1:30pm - 2:00pm
Why am I sleepy during the day? Hypersomnia management
David Rye (United States)

2:00pm - 2:30pm
Restless legs syndrome causes and treatments
Richard Allen (United States)

2:30pm - 3:00pm
Can my dentist help me sleep?
Fernanda Almeida (Canada)

3:00pm - 3:30pm
Sleep apnea diagnosis and treatments
John Fleetham (Canada)

3:30pm - 4:00pm
How sleep can affect your health
Virend Somers (United States)

4:00pm - 4:30pm
Falling asleep at the wheel
Mark Howard (Australia)

4:30pm - 5:00pm
Effect of sleep on sports performance and sports injury
Charles Samuels (Canada)

5:00pm - 5:30pm
Sleep walking, night terrors, and nightmares
Antonio Zadra (Canada)

5:30pm - 6:30pm
Discussion Group: Inaugural World Narcolepsy Day Forum
Matt O'Neill (United Kingdom); Julie Flygare (Canada); Claire Crisp (United Kingdom); Eveline Honig (Canada); Rebecca King; (United States); Mark Patterson (United States)

Sleep Expo 2019: Author Tables

10:00am – 2:00pm | 109 Foyer

10:15am – 10:45am
Author Table: Sharon Moore, "Sleep Wrecked Kids: Helping Parents Raise Happy, Healthy Kids, One Sleep at a Time"
Sharon Moore (Australia)

11:15am - 11:45pm
Author Table: Paul Glovinsky, "You Are Getting Sleepy: Lifestyle-Based Solutions for Insomnia"
Paul Glovinsky (United States)

12:15pm - 12:45pm
Author Table: Julie Flygare, "Wide Awake and Dreaming: A Memoir of Narcolepsy"
Julie Flygare (Canada)

1:15pm - 1:45pm
Author Table: Claire Crisp, "Waking Matilda: A Memoir of Childhood Narcolepsy"
Claire Crisp, United Kingdom

Separately purchased ticket is required for entry to congress courses.
Available at worldsleepcongress.com/register.

C16 Narcolepsy and other hypersomnias: Diagnostic approach and management

1:00pm – 5:00pm I Rooms 215-216

Chairs:
Merrill S. Wise (United States); Tomi Sarkanen (Finland)

1:00pm - 1:10pm
Introduction
Merrill S. Wise (United States); Tomi Sarkanen (Finland)

1:10pm - 1:50pm
Narcolepsy: presentation, assessment and diagnosis
Tomi Sarkanen (Finland)

1:50pm - 2:30pm
Idiopathic Hypersomnia and other Hypersomnias: presentation, assessment and diagnosis
Lynn Marie Trotti (United States)

2:30pm - 2:50pm
Coffee break

2:50pm - 3:25pm
Narcolepsy in Children
Merrill S. Wise (United States)

3:25pm - 4:10pm
Treatment of Narcolepsy and Other Hypersomnias
Yves Dauvilliers (France)

4:10pm - 4:40pm
Psychosocial, Academic and Vocational Aspects of Hypersomnia
Berit Hjelde Hansen (Norway)

4:40pm - 5:00pm
Conclusion / Question and Answer
Merrill S. Wise (United States); Tomi Sarkanen (Finland)

A06: A critical review of orofacial myofunctional therapy & sleep disordered breathing: Phenotyping, clinical markers, and early intervention

1:00pm – 5:45pm I Room 110

Chairs:
Marc Richard Moeller (United States); Sharon Keenan (United States)

1:00pm – 1:15pm
Introduction: The emerging area of myofunctional therapy; why sleep disordered breathing?
Marc Richard Moeller (United States)

1:15pm – 1:42pm
Should the kids breathe through nose or mouth? Implications of early treatment of respiratory dysfunction
Takashi Ono (Japan)

1:42pm – 2:09pm
Impaired pharyngeal dilator muscle function in OSA; a phenotype for new modalities of treatment
Venkata Koka (France)

2:09pm – 2:24pm
Orofacial Myofunctional Therapy (OMT) for obstructive sleep apnoea
Brigitte Fung (Hong Kong)

2:24pm – 2:51pm
Stick your tongue out: OMT and its place in pediatric OSA
Rakesh Bhattacharjee (United States)

2:51pm – 3:01pm
The certification paradox: balancing excellence and access in orofacial myofunctional therapy
Darius Logmahnee (United States)

3:01pm – 3:21pm
Break

3:21pm – 3:48pm
Need for orthodontic treatment under the age of seven: A predictor of increased risk for sleep related breathing disorders (SRDB)
Kevin Boyd (United States)

3:48pm – 4:10pm
Oral dysfunction and sleep meet education: A collaborative four-part school-based model for screenings
Nicole Archambault (United States)

4:10pm – 4:32pm
Oronasal abnormalities and dysfunctions in persistent sleep disordered breathing
Julia Cohen-Levy (France)

4:32pm – 4:52pm
Orofacial Myofunctional Therapy in the mouth breathing patient: An interdisciplinary approach and its place in sleep medicine
Silke Weber (Brazil)

4:52pm – 5:07pm
Pediatric OSA and the interdisciplinary team: the addition of myofunctional therapy to standards of care for the French Orthodontic Society
Mai Kahn Le Dacheux (France)

5:07pm – 5:17pm
Dentists need more than drills: the American Dental Association embracing whole person health
Steve Carstensen (United States)

5:17pm – 5:35pm
A call for changes to sleep education and sleep screening
Sharon Keenan (United States)

A07: Management of sleep related breathing disorder seminar: A surgical perspective

2:00pm – 6:00pm I Rooms 217-219

Chairs:
Vikas Agrawal (India); Vijaya Krishnan (India)

2:00pm – 2:15pm
Awake and dynamic assessment of OSAS patient for sleep surgery
Nathan Hayward (Australia)

2:15pm – 2:30pm
Understanding the pathophysiology of OSAS with DISE and Dynamic MRI with 3D modelling imaging
Vijaya Krishnan (India)

2:30pm – 2:45pm
Effect of Dexmedetomidine and propofol on airway dynamics during DISE
Sandeep Bansal (India)

2:45pm – 3:00pm
How do we improve the CPAP compliance
Dipankar Datta (India)

3:00pm – 3:15pm
Summary of RCTs in adult sleep surgery
Stuart MacKay (Australia)

3:15pm – 3:30pm
Summary of selected major observational studies in adult sleep surgery
Stuart MacKay (Australia)

3:30pm – 3:50pm
Panel discussion
Vijaya Krishnan (India)

3:50pm – 4:10pm
Break

4:10pm – 4:25pm
Surgical Anatomy of palate and tongue base to understand OSAS better
Vikas Agrawal (India)

4:25pm – 4:40pm
Bony framework surgery for OSAS – Airway aesthetics and Dynamics
M. Baskaran (India)

4:40pm – 4:55pm
Hypoglossal nerve implant – Is it the game changer?
Peter Baptista (Spain)

4:55pm – 5:10pm
Holistic management of OSAS
Song Tar Toh (Singapore)

5:10pm – 5:25pm
Surgical tips and pitfalls in the management of OSAS
Vikas Agrawal (India)

5:25pm – 5:40pm
Which operation(s) should be selected for my patient?
Vijaya Krishnan (India)

5:40pm – 6:00pm
Panel discussion
Vikas Agrawal (India)

Poster Session 1

4:30pm – 6:00pm I Exhibition

Opening Ceremony

6:00pm – 8:00pm I Ballroom A

The Opening Ceremony of World Sleep 2019 will take place at the Vancouver Convention Center, the hub of the World Sleep 2019 congress. The ceremony will feature award presentations, entertainment and networking. Join your colleagues to enjoy live music and entertainment.

Opening Blessing
First Nations indigenous peoples of Canada

Opening Remarks
Charles Morin, President, World Sleep Society

Welcome to Vancouver
Mary Ackenhusen, CEO Vancouver Coastal Health

Scientific Program Overview
Maree Barnes and Dalva Poyares, Program Committee

Canadian Sleep Society Awards
Chuck Samuels, President, Canadian Sleep Society

Elsevier Sleep Medicine Awards
Antonio Culebras, Chair:, Sleep Medicine Awards Committee

Young and New Investigator Awards
Allan O'Bryan, Executive Director, World Sleep Society

Distinguished World Sleep Day Awards
Liborio Parrino, Chair:, World Sleep Day Committee

CircusWest's FIRELIGHT
Mystical circus spectacular inspired by West Coast of Canada and featuring rainforest creatures, nature backdrops, live music, singing and choreographic circus acts.

Reception and networking in Ballroom Foyer will follow

Download the
World Sleep
2019 App

We are pleased to offer an interactive mobile app for World Sleep 2019. The app will allow you to view and search speaker names, sessions, rooms and topics. It will also include details about social events such as the Opening Ceremony. The World Sleep 2019 App will be available in the Google Play, and iTunes/iOS stores.

Download on the App Store

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BLUES Night

MONDAY NIGHT
SEPTEMBER 23, 2019
8:30PM – 11:30PM

ROOM 305
VANCOUVER
CONVENTION CENTRE

Max Hirshkowitz
Ron Richard
Roy Felts
Morris Chang
Todd Eiken
Joe Froelke

LIVE MUSICAL ENTERTAINMENT

COLD HORS D'OEUVRES | CASH BAR & DANCING | NO TICKET REQUIRED

World Sleep 2019
SEPTEMBER 20-25, 2019 | VANCOUVER, CANADA
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World Sleep 2019

SEPTEMBER 20-25, 2019 VANCOUVER, CANADA

THE BEST OF SLEEP MEDICINE AND RESEARCH | worldsleepcongress.com

AFFILIATED MEETING | TUESDAY, SEPTEMBER 24 | 9:00AM – 6:00PM

Sleep Research Society®

Canadian Sleep Society | Société Canadienne du Sommeil

SRS-CSS FRONTIERS SCIENTIFIC WORKSHOP

The Sleep Research Society (SRS) & Canadian Sleep Society (CSS) Frontiers Scientific Meeting is a 1-day workshop contained within the World Sleep scientific program. Register to attend this comprehensive and state-of-the-art update of the linking sleep to brain function and physiology in both experimental and population-based studies.

Summary

Sleep is important for the brain as well as the body. The workshop will include an exciting range of speakers that will present data linking sleep to brain function and physiology in both experimental and population-based studies. Our key speakers are renowned experts in the field of sleep and health (Dr. Phyllis Zee) and in the associations between sleep and cognitive function (Dr. Nadia Gosselin). Each featured presentation is followed by an oral symposium on a related theme with a broad range of speakers and topics.

Chairs

John Peever (Canada) | Kristen Knutson (United States)

INVITED SPEAKER: PHYLLIS ZEE

9:00am – 10:00am
Sleeping Well and Staying in Rhythm: Implications for brain and metabolic health
Phyllis Zee (United States)

SLEEP: IMPACT ON PHYSIOLOGY AND PUBLIC HEALTH

10:15am – 10:40am
Inflammatory and counter-inflammatory responses to chronic sleep disruption in humans
Monika Haack (United States)

10:40am – 11:05am
Sleep, recovery and human performance in elite athletes
Charles Samuels (Canada)

11:05am – 11:30am
The epidemiology of sleep and population health implications
Chandra L. Jackson (United States)

11:30am – 11:55am
Human sleep in comparative context: Exploring the link between our evolutionary history, health and well-being
David Samson (Canada)

INVITED SPEAKER: NADIA GOSSELIN

3:00pm – 4:00pm
Obstructive sleep apnea and the risk of cognitive decline in older adults
Nadia Gosselin (Canada)

SLEEP: IMPACT ON NEUROLOGICAL FUNCTION

4:15pm – 4:40pm
Chronic sleep loss neural injury: Play early, pay later
Sigrid Veasey (United States)

4:40pm – 5:05pm
Links between global and local sleep disruption and Alzheimer's disease pathophysiology
Bryce Mander (United States)

5:05pm – 5:30pm
REM sleep behavior disorder: Animal models and the neuronal network involved
Pierre-Hervé Luppi (France)

5:30pm – 5:55pm
Obstructive sleep apnea and Alzheimer's disease: Is amyloid the link between breathing and dementia?
Yo-El Ju (United States)

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World Sleep 2019

SEPTEMBER 20-25, 2019 ■ VANCOUVER, CANADA

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WWW.SYMPOSIAREG.COM/21901

Waking Up to Narcolepsy:
Strategies to Improving Outcomes

AGENDA

12:30 PM Introduction
Michael Thorpy, MD—Chair
(United States)

12:35 PM Strategies for Early and Accurate Diagnosis of Narcolepsy
Thomas Scammell, MD
(United States)

1:00 PM Treatments for Narcolepsy: Evaluating the Landscape
Michael Thorpy, MD

1:25 PM Optimizing Outcomes in Pediatric Patients
Kiran Maski, MD, MPH
(United States)

1:50 PM Take-Home Tips for Clinical Practice

Meet the Professor — Room TBD
2:00 PM to 2:45 PM

Monday, September 23, 2019

12:30 PM – 2:00 PM

Vancouver Convention Centre West

Ballroom A
1055 Canada Pl • Vancouver, BC

CHAIR

Michael Thorpy, MD

Professor of Neurology
Albert Einstein College of Medicine
Bronx, New York

FACULTY

Kiran Maski, MD, MPH

Assistant Professor of Neurology
Harvard Medical School
Boston, Massachusetts

Thomas Scammell, MD

Professor of Neurology
Harvard Medical School
Boston, Massachusetts

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This activity is supported by an independent educational grant from Jazz Pharmaceuticals, Inc.

This program is sponsored by VOX media

INSOMNIA:
IT'S A NIGHT AND DAY ISSUE

Monday, September 23, 2019
12:30 PM - 2:00 PM
Lunch Symposium

VANCOUVER CONVENTION CENTRE, WEST
Room # 121

Presented by:

- **SONIA ANCOLI-ISRAEL, PhD**
  Professor Emeritus of Psychiatry and Medicine
  Professor of Research
  University of California San Diego School of Medicine
  San Diego, California
- **EVE VAN CAUTER, PhD**
  Frederick H. Newman Professor
  Section of Endocrinology, Diabetes and Metabolism
  University of Chicago
  Chicago, Illinois

Insomnia can have significant implications on next-day performance and long-term health. This symposium reviews the impact of poor sleep on daytime performance issues such as cognitive function, memory impairment, and reduced productivity, as well as potential effects on overall health including cardiovascular disease, diabetes, depression, and age-related neuro-cognitive decline.

CME credits are not offered with this program.

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Advancing Sleep-Wake Science

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INSM-US2167

K01: Insomnia: Public health burden and new trends in treatment development and dissemination

8:00am – 8:45am I Ballroom A

8:00am - 8:02am
Introduction
Allison G. Harvey (United States)

8:02am - 8:45am
Keynote Presentation
Charles Morin (Canada)

K02: Oral appliance therapy for obstructive sleep apnea: Ready for prime time (a state of the art review of the field)

8:00am – 8:45am I Rooms 118-120

8:00am - 8:02am
Introduction
Fernanda Almeida (Canada)

8:02am - 8:45am
Keynote Presentation
Peter Cistulli (Australia)

S01: Opioids and sleep disordered breathing: From biomedical research to clinical practice

9:00am – 10:30am I Ballroom A

Chairs:
Tetyana Kendzerska (Canada), Clodagh Ryan (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Pathophysiology of opioid-induced sedation and respiratory depression
Gaspard Montandon (Canada)

9:18am – 9:34am
The effects of acute and chronic opioid use on sleep architecture and respiration during sleep: Clinical and polysomnographic effects
Atul Malhotra (United States)

9:34am – 9:50am
How do we predict sleep apnea in patients on opioids?
Clodagh Ryan (Canada)

9:50am – 10:06am
The relationship between opioid use in adults with suspected sleep-disordered breathing, positive airway pressure treatment prescription and associated long-term consequences
Tetyana Kendzerska (Canada)

10:06am – 10:22am
The treatment of sleep-disordered breathing in individuals on opioids
Sutapa Mukherjee (Australia)

10:22am – 10:30am
Conclusion

S02: Sleep, sleep disorders and perioperative care

9:00am – 10:30am I Rooms 118-120

Chair:
John Fleetham (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep and anesthesia: The physiological common ground
Clifford B. Saper (United States)

9:22am – 9:42am
Obstructive sleep apnea, and obesity hypoventilation syndrome: Who should be assessed, and how should we optimize?
Frances Chung (Canada)

9:42am – 10:02am
Narcolepsy, restless legs syndrome, and parasomnias: Non-Respiratory sleep disorders in the perioperative environment
Dennis Auckley (United States)

10:02am – 10:22am
Sleep in the hospitalized patient: An under-appreciated influence on recovery?
David Hillman (Australia)

10:22am – 10:30am
Conclusion

S03: Prognostic value of the different available methods for upfront prediction of treatment outcome with non-CPAP therapy towards a more personalized treatment of obstructive sleep apnea

9:00am – 10:30am I Room 109

Chair:
Marie Marklund (Sweden)

9:00am – 9:02am
Introduction

9:02am – 9:18am
What have we learned from the past about prediction of treatment outcome with non-CPAP treatment for sleep-related breathing disorders
Marc Braem (Belgium)

9:18am – 9:34am
The application of imaging to extract anatomical predictors of non-CPAP treatment success
Richard Schwab (United States)

9:34am – 9:50am
Multimodal prediction: Awake versus sleep-related assessments
Peter Cistulli (Australia)

9:50am – 10:06am
Feedback-Controlled Mandibular Positioner (F-RCMP) to predict oral appliance therapy outcome
Shouresh Charkhandeh (Canada)

10:06AM – 10:22AM
The role of pathophysiological phenotyping in predicting therapeutic outcome with upper airway stimulation and mandibular advancement device treatment
Olivier Vanderveken (Belgium)

10:22am – 10:30am
Conclusion

S04: The subjective experience of sleep: Emerging objective correlates

9:00am – 10:30am I Rooms 121-122

Chair:
Francesca Siclari (Switzerland)

9:00am – 9:02am
Introduction

9:02am – 9:18am
When a gold standard isn't so golden: Predicting subjective sleep quality from sleep polysomnography
Jamie Zeitzer (United States)

9:18am – 9:34am
Rapid eye movement sleep, sleep continuity and slow wave sleep as predictors of cognition, mood, and subjective sleep quality in healthy men and women
Derk-Jan Dijk (United Kingdom)

09:34am – 09:50am
Results from a NREM/REM sleep awakening study in good sleepers and patients with insomnia
Dieter Riemann (Germany)

9:50am – 10:06am
Feeling awake while asleep: A high-density EEG assessment of sleep perception
Francesca Siclari (Switzerland)

10:06am – 10:22am
Subjective-objective sleep discrepancy is associated with alterations in regional glucose metabolism in patients with insomnia and good sleeper controls
Daniel Kay (United States)

10:22am – 10:30am
Conclusion

S06: Effects of sleep and sleep loss on synaptic function

9:00am – 10:30am I Rooms 212-214

Chair:
Chiara Cirelli (United States)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep-dependent synaptic weakening across brain regions and during development
Chiara Cirelli (United States)

9:22am – 9:42am
A cortical neuron's view of sleep and wake
Steven Brown (Switzerland)

9:42am – 10:02am
Cortical synaptic plasticity during slow wave sleep-related activity
Ole Paulsen (United Kingdom)

10:02am – 10:22am
Regulation of hippocampal dendritic spines following sleep deprivation
Barbara Gisabella (United States)

10:22am – 10:30am
Conclusion

S07: Innovative multi-cultural approaches to sleep health education for children and families
9:00am – 10:30am I Rooms 217-219

Chair:
Judith Owens (United States)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Sleep education for adolescents in Asia
Yun Kwok Wing (Hong Kong)

9:18am – 9:34am
Novel delivery methods for sleep education
Mirja Quante (Germany)

9:34am – 9:50am
Sleep education in the school setting: Pros and cons
Gabrielle Rigney (Australia)

9:50am – 10:06am
Multi-level sleep health education in low-income child care settings
Karen Bonuck (United States)

10:06am – 10:22am
Developing and testing a culturally and contextually-tailored sleep hygiene intervention for high-risk youth
Daphne Koinis-Mitchell (United States)

10:22am – 10:30am
Conclusion

S08: Sleep-disordered breathing and maternal and fetal outcomes of pregnancy
9:00am – 10:30am I Rooms 220-222

Chair:
R John Kimoff (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:25am
Sleep-disordered breathing in pregnancy: Definitions, diagnosis and prevalence
Judette Louis (United States)

9:25am – 9:48am
Sleep-disordered breathing and maternal outcomes of pregnancy
Ghada Bourjeily (United States)

9:48am – 10:06am
Impact of maternal sleep-disordered breathing on fetal/infant outcomes
Najib Ayas (Canada)

10:06am – 10:24am
Treatment of sleep-disordered breathing during pregnancy: PAP, oral appliances and beyond
Sushmita Pamidi (Canada)

10:24am – 10:30am
Conclusion

O01: Insomnia treatment and mechanisms
9:00am – 10:30am I Rooms 116-117

Chairs:
Allison G. Harvey (United States); Simon Kyle (United Kingdom)

9:00am - 9:15am
IS RESTRICTION OF TIME IN BED CENTRAL TO THE EFFICACY OF SLEEP RESTRICTION THERAPY FOR INSOMNIA? RESULTS FROM A RANDOMISED, CONTROLLED, DISMANTLING TRIAL COMPARING SLEEP RESTRICTION WITH BEDTIME CONSISTENCY
Leonie Franziska Maurer (United Kingdom)

9:15am - 9:30am
SEQUENCED THERAPIES FOR PATIENTS WITH CHRONIC INSOMNIA DISORDER: FINDINGS DERIVED FROM SLEEP DIARY DATA
Jack Edinger (United States)

9:30am – 9:45am
EFFICACY OF A STEPPED CARE APPROACH TO OFFER COGNITIVE-BEHAVIORAL THERAPY FOR INSOMNIA IN CANCER PATIENTS
Josée Savard (Canada)

9:45am – 10:00am
LONG-TERM EFFECTIVENESS AND SAFETY OF LEMBOREXANT IN ADULTS WITH INSOMNIA DISORDER: 12-MONTH RESULTS FROM SUNRISE-2
Margaret Moline (United States)

10:00am – 10:15am
A RANDOMIZED CONTROLLED TRIAL OF SUVOREXANT FOR TREATING INSOMNIA IN PATIENTS WITH ALZHEIMER'S DISEASE: EFFECTS ON OBJECTIVE SLEEP MEASURES
W. Joseph Herring (United States)

10:15am – 10:30am
EFFECT OF LEMBOREXANT COMPARED WITH PLACEBO AND ZOLPIDEM EXTENDED RELEASE ON SLEEP ARCHITECTURE IN OLDER ADULTS WITH INSOMNIA DISORDER
Gary Zammit (United States)

O02: Pediatric issues
9:00am – 10:30am I Rooms 215-216

Chairs:
Rosemary Horne (Australia); Rakesh Bhattacharjee (United States)

9:00am - 9:15am
OBSTRUCTIVE SLEEP APNEA IS INDEPENDENTLY ASSOCIATED WITH INSULIN RESISTANCE IN ASIAN INDIAN CHILDREN
Surya Prakash (India)

9:15am - 9:30am
INCIDENCE AND PREDICTOR OF OBSTRUCTIVE SLEEP APNEA IN CHILDREN WITH ADENOTONSILLAR HYPERTROPHY AND NORMAL/INCONCLUSIVE OVERNIGHT OXIMETRY: A PROSPECTIVE STUDY
Montida Veeravigrom (Thailand)

9:30am – 9:45am
LONG-TERM BENEFITS IN SLEEP, BREATHING AND GROWTH AND CHANGES IN ADHERENCE IN CHILDREN ON NON-INVASIVE VENTILATION
Maria L Castro-Codesal (Canada)

9:45am – 10:00am
SLEEP MACRO-ARCHITECTURE AND MICRO-ARCHITECTURE IN CHILDREN BORN PRETERM WITH SLEEP DISORDERED BREATHING
Rosemary Horne (Australia)

10:00am – 10:15am
INCREASED BEHAVIORAL PROBLEMS AT 5 YEARS OF AGE ARE ASSOCIATED WITH SLEEP DISORDERED BREATHING PHENOTYPES, BASED ON PARENT-REPORTED SYMPTOMS: THE CANADIAN HEALTHY INFANT LONGITUDINAL DEVELOPMENT BIRTH COHORT STUDY
Charmaine van Eeden (Canada)

10:15am – 10:30am
MIDDAY NAPPING IN CHILDREN: ASSOCIATIONS BETWEEN NAP FREQUENCY AND DURATION ACROSS COGNITIVE, POSITIVE PSYCHOLOGICAL WELL-BEING, BEHAVIORAL, AND METABOLIC HEALTH OUTCOMES
Sara Mednick (United States)

O03: Basic research: Animals
9:00am – 10:30am I Room 110

Chairs:
John Peever (Canada); Christian Cajochen (Switzerland)

9:00am - 9:15am
SLEEP-WAKE STATES IN FREELY BEHAVING MARMOSETS
Olga Bukhtiyarova (Canada)

9:15am - 9:30am
ACTIVATION OF ADENOSINE A2A RECEPTORS IN THE OLFACTORY TUBERCLE PROMOTES SLEEP IN RODENTS
Yi-Qun Wang (China)

9:30am – 9:45am
SLEEP FRAGMENTATION DOES NOT MODIFY CARDIAC FUNCTION IN A MOUSE MODEL OF HEART FAILURE
Isaac Almendros (Spain)

9:45am – 10:00am
SELECTIVE SILENCING OF LAYER 5 PYRAMIDAL NEURONS INCREASES WAKE TIME AND AFFECTS LOCAL AND GLOBAL SLEEP HOMEOSTASIS
Lukas B. Krone (United Kingdom)

10:00am – 10:15am
PROLONGED WAKEFULNESS ENHANCES MOTOR SKILL CONSOLIDATION THROUGH D1R NEURONS IN THE DORSOMEDIAL STRIATUM IN MICE
Lu Wang (China)

10:15am – 10:30am
SLEEP IN PRADER-WILLI MOUSE MUTANTS: THE EFFECTS OF PITOLISANT
Marta Pace (Italy)

T01: Clinical guidelines on manual/APAP titrations (workshop)
9:00am – 10:30am I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

9:00am – 10:30am
Clinical guidelines on manual/APAP titrations
Amber Allen (United States)

Exhibition
10:00am – 4:00pm I Exhibition

S10: Bridging basic research to clinical aspects in REM sleep behavior disorder: From bench to bed

10:45am – 12:15pm I Rooms 121-122

Chair:
Ambra Stefani (Austria)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Synucleinopathic degeneration of REM sleep circuits triggers RBD in mice
John Peever (Canada)

11:07am – 11:27am
Genetic studies provide further insights into pathogenetic mechanisms of RBD
Jennifer Ruskey (Canada)

11:27am – 11:47am
How basic science explains dream content, motor behaviors, and neurodegeneration in RBD
Ambra Stefani (Austria)

11:47am – 12:07pm
RBD associated with autoimmune disorder: Pathogenetic mechanisms explain clinical manifestations
Anna Heidbreder (Germany)

12:07pm – 12:15pm
Conclusion

S11: Large-scale genomic studies advancing understanding of sleep and circadian biology and disorders in humans

10:45am – 12:15pm I Room 211

Chair:
Susan Redline (United States)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Emerging challenges and opportunities in human genomic studies of sleep and circadian biology
Susan Redline (United States)

11:03am – 11:19am
Accelerating gene discovery using diverse international resources: UK Biobank, TOpmed, and CHARGE
Richa Saxena (United States)

11:19am – 11:35am
Genetic variants influencing sleep and chronotype: Clinical and biological insights from the UK biobank
Martin Rutter (United Kingdom)

11:35am – 11:51am
Genetic variants and genomic profiles for sleep disordered breathing related traits in the NHLBI TOpmed consortium
Brian Cade (United States)

11:51am – 12:07pm
Investigating the biology of sleep-associated cardiometabolic traits using gene-sleep interactions: CHARGE
Raymond Noordam (The Netherlands)

12:07pm – 12:15pm
Conclusion

S12: Using sleep to maximize the mental and cognitive health of young people around the world

10:45am – 12:15pm I Rooms 212-214

Chair:
Reut Gruber (Canada)

10:45am – 10:50am
Introduction

10:50am – 11:05am
What does a good night's sleep mean? Associations between sleep and children's cognitive functioning and mental health
Joseph Buckhalt (United States); Mona El Sheikh (United States); Ryan Kelly (United States)

11:05am – 11:20am
Findings and next steps for delaying school start times for adolescents' sleep and health
Amy Wolfson (United States)

11:20am – 11:35am
Low vs high-intensity school sleep interventions for teenagers
Kate Bartel (Australia)

11:35am – 11:50am
Sleep behavior phenotypes in adolescents at risk for depression
Joshua J. Gooley (Singapore)

11:50am – 12:05pm
Discussion: Lessons learned and gaps remaining
Mary Carskadon (United States)

12:05pm – 12:15pm
Conclusion

S13: Sleepy heads and anesthesia: Anesthetic implications of disorders of daytime hypersomnolence

10:45am – 12:15pm I Rooms 215-216

Chair:
Mandeep Singh (Canada)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Unconsciousness, sleep and anesthesia: Shared mechanisms
Dennis Auckley (United States)

11:07am – 11:27am
Narcolepsy or idiopathic hypersomnia: What's the difference?
Lynn Marie Trotti (United States)

11:27am – 11:47am
Pharmacological treatment options and possible drug interactions with anesthesia management
Mandeep Singh (Canada)

11:47am – 12:07pm
Anesthetic considerations for patients with narcolepsy and idiopathic hypersomnia
David Hillman (Australia)

12:07pm – 12:15pm
Conclusion

S14: Multidimensional sleep health: A new paradigm for understanding sleep-health relationships

10:45am – 12:15pm I Rooms 220-222

Chair:
Daniel J. Buysse (United States)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Multidimensional sleep health: Can we define it? Does it matter?
Daniel J. Buysse (United States)

11:03am – 11:19am
The National Sleep Foundation's Sleep Health index: An assessment of national sleep health
Kristen Knutson (United States)

11:19am – 11:35am
Statistical approaches for analyzing multidimensional sleep health data
Meredith J. Wallace (United States)

11:35am – 11:51am
Multidimensional sleep health is more strongly associated with self-rated health than traditional predictors: The Catalan Health Survey
Jordi de Batlle (Spain)

11:51am – 12:07pm
Multidimensional sleep health and age-related functional outcomes
Katie L. Stone (United States)

O04: Women

10:45am – 12:15pm I Room 116-117

Chairs:
Megan R. Crawford (United Kingdom); Helen Driver (Canada)

10:45am - 11:00am
THREE CONSECUTIVE NIGHTS OF RESTRICTED SLEEP: EFFECTS OF MORNING CAFFEINE CONSUMPTION ON MOOD, REACTION TIME AND SIMULATED DRIVING PERFORMANCE
Karly Bartrim (Australia)

11:00am - 11:15am
BROKEN WINDOWS, BROKEN ZZ´S: ADVERSE HOME ENVIRONMENTS PREDICT OBJECTIVE SLEEP PROBLEMS
Wendy Troxel (United States)

11:15am - 11:30am
SLEEP EXTENSION REDUCES ENERGY INTAKE IN FREE-LIVING OVERWEIGHT ADULTS: A RANDOMIZED CONTROLLED STUDY
Esra Tasalir (United States)

11:30am - 11:45am
SLEEP AND CIRCADIAN HEALTH IN AUSTRALIANS AGED 5 TO 85 YEARS
Yu Sun Bin (Australia)

11:45am - 12:00pm
SLEEP PATTERNS, GLYCOLIPID METABOLISM DISORDERS AND PROSPECTIVE COHORT STUDIES
Xue Li (China)

12:00pm - 12:15pm
DIFFERENCE OF LONGITUDINAL SLEEP BEHAVIOR CHANGE BY GENDER IN THE MIDDLE AGE: THE KOREAN GENOME AND EPIDEMIOLOGY STUDY (KOGES)
Hyeon Jin Kim (Republic of Korea)

S09: Treatment modalities for sleep apnea patients with complex comorbidities
10:45am – 12:15pm I Room 109

Chair:
Hiroko Tsuda (Japan)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Incidence and treatment of OSA in the psychiatric population
Nathaniel Marshall (Australia)

11:03am – 11:19am
CPAP treament for patients with heart failure
John Fleetham (Canada)

11:19am – 11:35am
Does CPAP improve diabetes outcomes in OSA patients
Sushmita Pamidi (Canada)

11:35am – 11:51am
Oral appliances outcomes in diabetes and other complex cases
Tea Galic (Croatia)

11:51am – 12:07pm
Prevalence and treatment of OSA in adults with down syndrome
Lizzie Hill (United Kingdom)

12:07pm – 12:15pm
Conclusion

T02: Reading and analyzing PAP downloads (workshop)
10:45am – 11:30am I Rooms 223-224

Chairs:
Shalanda Mitchell (United States); Michael Eden (United States)

10:45am – 11:30am
Reading and analyzing PAP downloads
Laree Fordyce (United States); Angelica Benitez (Colombia); Alanna Cornish (United States)

D01: Defining and identifying "restless sleep disorder" among sleep disorders of childhood
10:45am – 12:15pm I Rooms 118-120

Chair:
Lourdes DelRosso (United States)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Clinical and video polysomnographic findings in children with restless sleep
Lourdes DelRosso (United States)

11:07am – 11:27am
Diagnostic criteria for pediatric RLS and PLMD
Arthur Walters (United States)

11:27am – 11:47am
Hypermotor insomnia and other insomnia types in childhood
Oliviero Bruni (Italy)

11:47am – 12:07pm
Effects of iron deficiency on brain development
Patricio Peirano (Chile)

12:07pm – 12:15pm
Conclusion

T03: PSG, PAP, & CO2 'Oh My'
11:30am – 12:30pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

11:30am – 12:30pm
PSG, PAP, & CO2 'Oh My'
Julie Dewitte (United States)

Restless legs syndrome: Progress and pitfalls
12:30pm – 2:00pm I Rooms 220-222

12:30pm – 2:00pm
Restless legs syndrome
John Winkelman (United States)

Insomnia: It's a night and day issue
12:30pm – 2:00pm I Rooms 121-122

Sonia Ancoli-Israel (United States); Eve Van Cauter (United States)

Positional sleep apnea and its treatment
12:30pm – 2:00pm I Rooms 217-219

12:30pm - 12:35pm
Introduction
Cheryl Needham (United States)

12:35pm - 1:10pm
Positional obstructive sleep apnea: Why and how it should be treated
Nico de Vries (The Netherlands)

1:10pm - 1:45pm
Evidence for the treatment of positional obstructive sleep apnea
JL Pepin (France)

1:45pm - 2:00pm
Question and Answer

Waking up to narcolepsy: Strategies to improving outcomes
12:30pm – 2:00pm I Ballroom A

Chair:
Michael Thorpy (United States)

12:30pm – 12:35pm
Introduction
Michael Thorpy (United States)

12:35pm – 1:00pm
Strategies for early and accurate diagnosis of narcolepsy
Thomas Scammell (United States)

1:00pm – 1:25pm
Treatments for narcolepsy: evaluating the landscape
Michael Thorpy (United States)

1:25pm – 1:50pm
Optimizing outcomes in pediatric patients
Kiran Maski (United States)

1:50pm – 2:00pm
Take-home tips for clinical practice

Beyond the AHI
1:00pm – 1:45pm I Rooms 215- 216

1:00pm - 1:02pm
Introduction

1:02pm - 1:22pm
Use of RIP to measure respiratory drive and ventilation
Andrew Wellman (United States)

1:22pm - 1:42pm
Is the Apnea-Hypopnea Index the best way to quantify the severity of sleep-disordered breathing? No.
Naresh Punjabi (United States)

1:42pm - 1:45pm
Question and Answer

Patient selection: The new paradigm for collaborative treatment success in patients with OSA
1:00pm – 1:45pm I Rooms 223-224

1:00pm - 1:05pm
Introduction

1:05pm - 1:15pm
John E. Remmers (Canada)

1:15pm - 1:25pm
Sharnell Muir (Canada)

1:25pm - 1:35pm
Edward T. Sall (United States)

1:35pm - 1:45pm
Question and answer

World Sleep Day networking event
1:00pm – 2:00pm I Room 109

Press meeting
1:00pm – 1:30pm I Room 201

Christian Guilleminault Memorial
2:00pm – 2:13pm I Ballroom A

2:00pm - 2:02pm
Introduction
Reut Gruber (Canada)

2:02pm - 2:13pm
Keynote Presntation
Oliviero Bruni (Italy)

K03: Adolescent sleep: Timing is everything… or is it?
2:13pm - 2:55pm I Ballroom A

2:13pm - 2:55pm
Keynote Presentation
Mary Carskadon (United States)

T04: Adult PSG scoring bootcamp (workshop)
2:00pm - 3:30pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

2:00pm - 3:30pm
PSG, PAP, & CO2 'Oh My'
Laree Fordyce (United States); Joel Porquez (United States)

Meet the Professor
2:00pm – 2:45pm I Rooms 116-117

Chair:
Michael Thorpy (United States)

1:45pm - 2:45pm
Panel Discussion
Thomas Scammell (United States); Michael Thorpy (United States); Kiran Maski (United States)

S15: Management of sleep disordered breathing in specific populations: New insights from recent publications
3:00pm – 4:30pm I Ballroom A

Chairs:
Najib Ayas (Canada); Motoo Yamauchi (Japan)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Management of sleep apnea in minimally symptomatic patients
Luciano Drager (Brazil)

3:22pm – 3:42pm
Management of sleep apnea in patients with heart failure
Matt Naughton (Australia)

3:42pm – 4:02pm
Management of sleep apnea in patients with spinal cord injury
David Berlowitz (Australia)

4:02pm – 4:22pm
Sleep apnea and kidney disease: A bidirectional relationship
Patrick Hanly (Canada)

4:22pm – 4:30pm
Conclusion

S16: Imaging and sleep apnea: Can we predict the presence of disease and treatment outcomes?
3:00pm – 4:30pm I Room 109

Chair:
Fernanda Almeida (Canada)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Photography for the evaluation of facial profiles in obstructive sleep apnea
Kate Sutherland (Australia)

3:22pm – 3:42pm
Facial characteristics of children with OSA: Results of the PDSA cohort study
Fernanda Almeida (Canada)

3:42pm – 4:02pm
TAG-MRI phenotyping and predicting treatment outcomes
Lynne Bilston (Australia)

4:02pm – 4:22pm
The role of CBCT in the diagnosis and oral appliance treatment outcome
Bingshuang Zou (Canada)

4:22pm – 4:30pm
Conclusion

S17: Frontiers of dissemination of CBT for sleep and circadian problems in mental and physical health
3:00pm – 4:30pm I Rooms 121-122

Chair:
Allison G. Harvey (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Sequencing internet-based and face-to-face CBT-I in a stepped-care model of insomnia management in primary care
Charles Morin (Canada)

3:18pm – 3:34pm
The short- and long-term efficacy of an unguided internet- based cognitive-behavioral therapy for insomnia: A large randomized controlled trial
Borge Sivertsen (Norway)

3:34pm – 3:50pm
Sleep as a novel therapeutic target for depression: A meta analysis of randomized controlled trials of digital CBT for insomnia
Colin Espie (United Kingdom)

3:50pm – 4:06pm
The Hypertension with Unsatisfactory Sleep Health (HUSH) study: A low-cost, pragmatic, patient-centered clinical trial
Daniel J. Buysse (United States)

4:06pm – 4:22pm
A transdiagnostic sleep and circadian treatment to improve severe mental illness outcomes in a community setting: The results of a randomized controlled trial
Allison G. Harvey (United States)

4:22pm – 4:30pm
Conclusion

S18: The molecular and physiological mechanisms of sleep

3:00pm – 4:30pm I Room 211

Chairs:
Shoi Shi (Japan); Hiroaki Norimoto (Germany)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Genetic identification of cholinergic mechanisms controlling sleep and wakefulness
Yasutaka Niwa (Japan)

3:18pm – 3:34pm
Spatio-temporal structure of sleep oscillations in reptilian brain
Hiroaki Norimoto (Germany)

3:34pm – 3:50pm
Synaptic AMPA receptor plasticity by learning and sleep
Daisuke Miyamoto (United States)

3:50pm – 4:06pm
Newly-identified sleep genes: The role of calcium dependent hyperpolarization pathway in sleep regulation
Shoi Shi (Japan)

4:06pm – 4:22pm
Genetic dissection of sleep in fruit flies
Hirofumi Toda (United States)

4:22pm – 4:30pm
Conclusion

S19: Novel strategies to personalize OSA treatment and care from adolescents to adults

3:00pm – 4:30pm I Rooms 212-214

Chairs:
Susan Redline (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Pathophysiological phenotypes of OSA
Jayne Carberry (Australia)

3:22pm – 3:42pm
Novel targeted therapies for OSA in adults
Danny Eckert (Australia)

3:42pm – 4:02pm
Personalized approach for OSA in adolescence: Is it time to through away the CPAP?
Indra Narang (Canada)

4:02pm – 4:22pm
Aligning a personalized approach to OSA with patient centered outcomes
Clodagh Ryan (Canada)

4:22pm – 4:30pm
Conclusion

S20: Pathophysiological insights from animal models of restless legs syndrome

3:00pm – 4:30pm I Rooms 217-219

Chair:
Yuqing Li (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Pathophysiological insights from the iron deficient rats
Yuan-Yang Lai (United States)

3:22pm – 3:42pm
Pathophysiological studies of RLS using BTBD9 mutant animal models
Yuqing Li (United States)

3:42pm – 4:02pm
MEIS1-based animal models and the pathophysiology of RLS
Aaro Salminen (Germany)

4:02pm – 4:22pm
Use of animal models for the pathophysiological study of RLS
Mauro Manconi (Switzerland)

4:22pm – 4:30pm
Conclusion

O05: SBD Epidemiology

3:00pm – 4:30pm I Rooms 116-117

Chair:
Allan Pack (United States); Robert Thomas (United States)

3:00pm - 3:15pm
SARCOPENIC OBESITY IS ASSOCIATED WITH OBSTRUCTIVE SLEEP APNEA: A POPULATION-BASED STUDY
Ronaldo Delmonte Piovezan (Brazil)

3:15pm - 3:30pm
SEVERE OBSTRUCTIVE SLEEP APNEA ASSOCIATED WITH STAGE III-IV LUNG CANCER MORTALITY: A COHORT STUDY
Hung Yu Huang (Taiwan)

3:30pm - 3:45pm
SCREENING FOR OBSTRUCTIVE SLEEP APNEA IN STROKE AND TIA PATIENTS USING A PORTABLE SLEEP MONITOR: A RANDOMIZED CONTROLLED TRIAL
Mark Boulos (Canada)

3:45pm - 4:00pm
SEX DIFFERENCES IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA AND SUSPECTED HYPOVENTILATION ON HOME SLEEP APNEA TESTING
Sachin R. Pendharkar (Canada)

4:00pm - 4:15pm
MULTIPLE SLEEP DIMENSIONS AND CHRONIC KIDNEY DISEASE: FINDINGS FROM THE MULTI-ETHNIC STUDY OF ATHEROSCLEROSIS
Chandra L. Jackson (United States)

4:15pm - 4:30pm
COMPREHENSIVE CHARACTERIZATION OF GENETIC AND PHENOTYPIC HETEROGENEITY OF OBSTRUCTIVE SLEEP APNEA ACROSS MULTIPLE UNITED STATES CLINICS
Olivia J. Veatch (United States)

O06: Better memory with better sleep

3:00pm – 4:30pm I Rooms 215-216

Chairs:
Stuart Fogel (Canada); Philippe Peigneux (Belgium)

3:00pm - 3:15pm
SHORT-DURATION REPETITIVE TRANSCRANIAL ELECTRICAL STIMULATION DURING A DAYTIME NAP IMPROVES MEMORY CONSOLIDATION
Nicola Cellini (Italy)

3:15pm - 3:30pm
SLEEP DEPRIVATION LEADS TO FRAGMENTED MEMORY LOSS
Scott Cairney (United Kingdom)

3:30pm - 3:45pm
CHRONIC SLEEP RESTRICTION INCREASES CONFIDENCE IN INCORRECT RESPONSES DURING A WORKING MEMORY TASK
Gina Marie Mathew (United States)

3:45pm - 4:00pm
MOOD AND SLEEP IMPROVEMENT WITH CRITICALLY-TIMED WAKE AND LIGHT INTERVENTIONS IN PREMENSTRUAL, PERIPARTUM VS. PERIMENOPAUSAL DEPRESSION DEPEND ON SPECIFIC UNDERLYING MELATONIN AND SLEEP CIRCADIAN PHASE DISTURBANCES
Barbara Parry (United States)

4:00pm - 4:15pm
A NIGHT OF SLEEP, BUT NOT A DAYTIME NAP IS NECESSARY FOR SLEEP-DEPENDENT CONSOLIDATION OF HIPPOCAMPAL MEMORY TRACES FOR A NEWLY ACQUIRED COGNITIVE STRATEGY
Nicholas H. van den Berg (Canada)

4:15pm - 4:30pm
DEACTIVATING COMPLETED INTENTIONS: A DARK-SIDE OF SLEEP IN PROSPECTIVE MEMORY
Qinhua Sun (United States)

O07: Young or new investigator awards
3:00pm – 4:30pm I Rooms 220-222

Chairs:
Liborio Parrino (Italy); Dalva Poyares (Brazil)

3:00pm - 3:15pm
THE HUMAN K-COMPLEX: INSIGHTS FROM COMBINED SCALP-INTRACRANIAL EEG RECORDINGS
Veronique Latreille (Canada)

3:15pm - 3:30pm
NEURAL CIRCUITS OF CATAPLEXY
Emi Hasegawa (Japan)

3:30pm - 3:45pm
THE CORPUS CALLOSUM IS ESSENTIAL FOR THE CROSS-HEMISPHERIC PROPAGATION OF SLEEP SLOW WAVES: A HIGH-DENSITY EEG STUDY IN TOTAL CALLOSOTOMIZED PATIENTS
Giulia Avvenuti (Italy)

3:45pm - 4:00pm
APNEA-HYPOPNEA INDEX IS ASSOCIATED WITH INCREASED LOOP GAIN DURING SLEEP AT ASCENDING ALTITUDES
Brooke M. Shafer (Canada)

4:00pm - 4:15pm
DEVELOPMENTAL TRAJECTORY OF SLEEP DISTURBANCES IN A SHANK3 MOUSE MODEL OF AUTISM
Hannah Schoch (United States)

4:15pm - 4:30pm
MANIPULATING MEMORY DURING SLEEP
Eva A.M. van Poppel (The Netherlands)

O08: REM sleep behavior
3:00pm – 4:30pm I Room 110

Chairs:
Yuichi Inoue (Japan); Jaques Montplaisir (Canada)

3:00pm - 3:15pm
HEALTH, SOCIAL AND ECONOMIC CONSEQUENCES OF REM SLEEP BEHAVIOR DISORDER: A CONTROLLED NATIONAL STUDY EVALUATING SOCIETAL EFFECTS
Rune Frandsen (Denmark)

3:15pm - 3:30pm
COMORBIDITIES IN CHILDREN WITH ELEVATED PERIODIC LEG MOVEMENT INDEX
Lourdes DelRosso (United States)

3:30pm - 3:45pm
THE ASSOCIATION BETWEEN REM SLEEP AND MORTALITY IN THE MROS AND WISCONSIN SLEEP COHORTS
Eileen B Leary (United States)

3:45pm - 4:00pm
HIPPOCAMPAL ACTIVATION DURING REM SLEEP REDUCES FEAR MEMORY
Jie Chen (China)

4:00pm - 4:15pm
NEW INSIGHTS INTO THE "GLYCOGENETIC" HYPOTHESIS OF SLEEP: BRAIN GLYCOGEN AVAILABILITY AFFECTS REM-RELATED THETA RHYTHM PROVIDING A POSSIBLE LINK WITH EMOTIONAL MEMORY MECHANISMS
Jean-Marie Petit (Switzerland)

4:15pm - 4:30pm
THE ROLE OF REM SLEEP IN THE FORMATION OF EMOTIONAL FALSE MEMORY – AN EXPERIMENTAL STUDY USING DEESE-ROEDIGER-MCDERMOTT (DRM) PARADIGM
Jiefan Ling (Hong Kong)

D02: Alternative diagnostic approaches to childhood obstructive sleep apnea
3:00pm – 4:30pm I Rooms 118-120

Chair:
Albert Martin Li (Hong Kong)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Pitfalls of polysomnography for childhood OSA, why is it failing us?
Rosemary Horne (Australia)

3:22pm – 3:42pm
Can parent-reported sleep symptom questionnaire and or overnight oximetry replace PSG?
Gillian Nixon (Australia)

3:42pm – 4:02pm
Combining imaging findings and symptoms in diagnosing OSA
Kate Chan (Hong Kong)

4:02pm – 4:22pm
Drug-induced sleep endoscopy is the way forward, where is the evidence?
An Boudewyns (Belgium)

4:22pm – 4:30pm
Conclusion

T05: Pediatric PSG complex case studies (workshop)

4:00pm – 5:00pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

4:00pm – 5:00pm
Pediatric PSG complex case studies
Julie Dewitte (United States)

S21: The nature of arousals: An update for the 21st century

4:30pm – 6:00pm I Ballroom A

Chair:
Régis Lopez (France)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
Cortical arousals: Determinants and role in obstructive sleep apnea
Magdy Younes (Canada)

4:52pm – 5:12pm
The relation of movements to cortical and autonomic arousals in sleep: Artificial intelligence – machine learning analyses
Richard Allen (United States)

5:12pm – 5:32pm
The problematic definition of arousals during SWS: Implications for the characterization of the NREM parasomnias
Régis Lopez (France)

5:32pm – 5:52pm
On the periodicity of arousals
Stephany Fulda (Switzerland)

5:52pm – 6:00pm
Conclusion

S05: Sleep and bidirectional changes in synaptic plasticity: The untold story

4:30pm – 6:00pm I Room 211

Chair:
Marcos G. Frank (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Sleep-dependent thalamocortical activity is crucial for visual system plasticity
Sara Aton (United States)

4:48pm – 5:04pm
Slow-wave sleep potentiates thalamocortical responsiveness and facilitates memory formation in mice
Igor Timofeev (Canada)

5:04pm – 5:20pm
Learning and sleep-dependent synaptic plasticity in the cortex
Wen Biao Gan (United States)

5:20pm – 5:36pm
Homeostatic regulation by GABA and glutamate receptors of cortical neurons in response to sleep deprivation
Barbara Jones (Canada)

5:36pm – 5:52pm
The tired hippocampus; elucidating the molecular underpinnings of sleep loss-induced memory impairments
Robbert Havekes (The Netherlands)

5:52pm – 6:00pm
Conclusion

S22: Advances in precision application of dental appliances: Indications, design, and prognostic risk

4:30pm – 6:00pm I Room 109

Chair:
Fernanda Almeida (Canada)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Oral appliance for Downs Syndrome
Fernanda Almeida (Canada)

4:48pm – 5:04pm
Application of oral appliance in Catathrenia (groaning)
Xuemei Gao (China)

5:04pm – 5:20pm
Mechanism and efficacy of magnetic levitation mandibular elevator in treatment of obstructive sleep apnea syndrome
Xilong Zhang (China)

5:20pm – 5:36pm
Phenotyping Obstructive Sleep Apnea: Bringing precision to oral appliance therapy
Kate Sutherland (Australia)

5:36pm – 5:52pm
3D imaging application in OSA
Bingshuang Zou (Canada)

5:52pm – 6:00pm
Conclusion

S23: Using eHealth to bridge the gap between research and practice for insomnia: Examples from across the lifespan

4:30pm – 6:00pm I Rooms 121-122

Chair:
Shelly Weiss (Canada)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
eHealth applications for infants and toddler sleep disturbances: Real world data and moving from efficacy to effectiveness
Jodi Mindell (United States)

4:48pm – 5:04pm
Development, evaluation and dissemination of Better Nights, Better Days for preschool and elementary school-aged children
Penny Corkum (Canada)

5:04pm – 5:20pm
Design and pilot RCT of a mHealth intervention for sleep promotion in adolescents
Robyn Stremler (Canada)

5:20pm – 5:36pm
Development of Better Nights, Better Days-Youth: The importance of a user-centered design when working with young adults
Gabrielle Rigney (Australia)

5:36pm – 5:52pm
Real world evidence: Impact of digital therapeutic for insomnia in adults
Frances Thorndike (United States)

5:52pm – 6:00pm
Conclusion

S24: Sleep-wake disturbance and the aging brain: Insights into the impact of poor sleep and sleep-disordered breathing on neurodegeneration

4:30pm – 6:00pm I Rooms 212-214

Chair:
Ruth M. Benca (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Introduction and Overview
Ruth M. Benca (United States)

4:48pm – 5:04pm
Altered circadian rest/activity rhythms and brain atrophy in cognitively normal older adults
Adam Spira (United States)

5:04pm – 5:20pm
Abnormal sleep neurophysiology in mild cognitive impairment and sleep-disordered breathing populations
Angela D'Rozario (Australia)

5:20pm – 5:36pm
Sleep disruption and Alzheimer's disease pathology: a mechanism for increased AD risk?
Bryce Mander (United States)

5:36pm – 5:52pm
What is the link between sleep-disordered breathing and neurodegeneration?
Sharon Naismith (Australia)

5:52pm – 6:00pm
Conclusion

S25: New insights on sleep at high altitude

4:30pm – 6:00pm I Rooms 217-219

Chair:
Nikolaus C. Netzer (Germany)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
The brain at altitude
Nikolaus C. Netzer (Germany)

4:48pm – 5:04pm
Cognitive decline after sleep at high altitude
Stephan Pramsohler (Germany)

5:04pm – 5:20pm
MRI studies on the brain after exposure to hypobaric hypoxia
Michael Decker (United States)

5:20pm – 5:36pm
Individual influences on hypoxia and hypobaria induced periodic breathing
Rachel Turner (United Kingdom)

5:36pm – 5:52pm
Does central sleep apnea help or hurt oxygenation during ascent to high altitude?
Trevor Day (Canada)

5:52pm – 6:00pm
Conclusion

O09: Sleep and aging
4:30pm – 6:00pm I Rooms 116-117

Chairs:
Katie L. Stone (United States); Bjørn Bjorvatn (Norway)

4:30pm - 4:45pm
SLEEP TIMING IS ASSOCIATED WITH GUT MICROBIOTA COMPOSITION IN OLDER ADULTS WITH INSOMNIA
Tamar Shochat (Israel)

4:45pm - 5:00pm
A PRELIMINARY EXAMINATION OF GUT MICROBIOTA COMPOSITION AND SLEEP QUALITY IN OLDER ADULTS WITH INSOMNIA
Iris Haimov (Israel)

5:00pm - 5:15pm
DOES WORKING MEMORY IMPROVE WITH SLEEP OR WAKE IN OLDER ADULTS?
Negin Sattari (United States)

5:15pm - 5:30pm
REPURPOSING LEVODOPA IN HEALTHY OLDER ADULTS TO ENHANCE SLOW WAVE SLEEP WITH POTENTIAL TO MODIFY DISEASE PROGRESSION IN ALZHEIMER'S DISEASE
Elizabeth Coulthard (United Kingdom)

5:30pm - 5:45pm
THE RELATIONSHIP BETWEEN SLEEP PATTERNS AND MULTIMORBIDITY AMONG COMMUNITY-DWELLING ADULTS IN THE CANADIAN LONGITUDINAL STUDY ON AGING
Kathryn Nicholson (Canada)

5:45pm - 6:00pm
ASSOCIATION BETWEEN SLEEP AND MENTAL HEALTH AND WELL-BEING AMONG OLDER ADULTS IN THE CANADIAN LONGITUDINAL STUDY ON AGING
Rebecca Rodrigues (Canada)

O10: Pediatrics
4:30pm – 6:00pm I Rooms 215- 216

Chairs:
Roger Godbout (Canada); Fiona Baker (South Africa)

4:30pm - 4:45pm
SLEEP PROBLEMS AMONG PRESCHOOL-AGED CHILDREN INVESTIGATED FOR MALTREATMENT
Samantha Brown (United States)

4:45pm - 5:00pm
AUTISTIC TEENS PERSONAL ACCOUNTS ABOUT THEIR SLEEP PROBLEMS AND DAYTIME ANXIETY
Dagmara Dimitriou (United Kingdom)

5:00pm - 5:15pm
SLEEP, BULLYING, AND PHYSICAL AND MENTAL HEALTH IN ADOLESCENCE
Alex Agostini (Australia)

5:15pm - 5:30pm
BEHAVIORAL AND EMOTIONAL CHARACTERISTICS OF CANADIAN CHILDREN WITH OBESITY AND MODERATE-SEVERE SLEEP-DISORDERED BREATHING TREATED WITH POSITIVE AIRWAY PRESSURE: LONGITUDINAL CHANGES AND ASSOCIATIONS WITH ADHERENCE
Evelyn Constantin (Canada)

5:30pm - 5:45pm
ASSOCIATIONS BETWEEN SLEEP, BRAIN CONNECTIVITY AND DEPRESSION SYMPTOMS IN CHILDHOOD
Aimee Goldstone (United States)

5:45pm - 6:00pm
CHILDHOOD SLEEP PATTERNS LONGITUDINALLY PREDICT LATER POST-TRAUMATIC STRESS AFTER HURRICANE HARVEY
Cara Palmer (United States)

O11: Psychiatric disorders
4:30pm – 6:00pm I Room 110

Chairs:
Joseph De Koninck (Canada); Yun Kwok Wing (Hong Kong)

4:30pm - 4:45pm
IRON DEFICIENCY AND NEURODEVELOPMENTAL DISORDERS (ADHD, AUTISM, FETAL ALCOHOL SPECTRUM DISORDER/FASD) – A SCOPING REVIEW
Ishmeet Singh (Canada)

4:45pm - 5:00pm
SLEEP HEALTH PROBLEMS AMONG YOUNG ADULTS WITH CURRENT AND PAST HOMELESSNESS EXPERIENCES
Brian Redline (United States)

5:00pm - 5:15pm
THE THERAPEUTIC BENEFIT OF SLEEP SPINDLESIN ADOLESCENTS WITH MAJOR DEPRESSIVE DISORDER
Balmeet Toor (Canada)

5:15pm - 5:30pm
SLEEP DISTURBANCE AND SUICIDALITY IN PATIENTS WITH BIPOLAR DISORDERS – THE MEDIATING ROLE OF RUMINATION AND IMPULSIVITY
Tin Wai Forrest Cheung (Hong Kong)

5:30pm - 5:45pm
TEMPORAL DYNAMICS OF HEART RATE DURING SLEEP IN PEOPLE WITH DEPRESSION
Karianne Dion (Canada)

5:45pm - 6:00pm
PRELIMINARY OBSERVATIONS ON THE RELATIONSHIP BETWEEN AUTONOMIC AROUSAL AND SLEEP IN PEOPLE WITH PTSD
Rebecca Robillard (Canada)

D03: Sleep medicine and research training opportunities throughout the world
4:30pm – 6:00pm I Rooms 118-120

Chair:
Clete Kushida (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Sleep medicine and research training opportunities in North America
Clete Kushida (United States); Brian Rowe (Canada)

4:48pm – 5:04pm
Sleep medicine and research training opportunities in Asia
Hrudananda Mallick (India)

5:04pm – 5:20pm
Sleep medicine and research training opportunities in Europe
Zoran Dogas (Croatia)

5:20pm – 5:36pm
Sleep medicine and research training opportunities in Australia
Brendon Yee (Australia)

5:36pm – 5:52pm
Sleep medicine and research training opportunities in South America
Dalva Poyares (Brazil)

5:52pm – 6:00pm
Conclusion

Poster session 2
5:30pm – 7:00pm I Exhibition

Gala Dinner
6:00pm – 8:30pm I Banquet Room 301

Blues Night
8:30pm – 11:30pm I Banquet Room 305
No ticket needed

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Founded by WORLD ASSOCIATION OF SLEEP MEDICINE and WORLD SLEEP FEDERATION

World Sleep Society Membership Meeting
7:00am – 7:50am I Rooms 118-120

K04: Sleep, insomnia and mental health: A chance for prevention?
8:00am – 8:45am I Ballroom A

8:00am - 8:02am
Introduction
Colin Espie (United Kingdom)

8:02am - 8:45am
Keynote Presentation
Dieter Riemann (Germany)

K05: Interactions between sleep, circadian rhythms and body weight regulation
8:00am – 08:45am I Room 211

8:00am - 8:02am
Introduction
Maree Barnes (Australia)

8:02am - 8:45am
Keynote Presentation
Eve Van Cauter (United States)

S26: Placing patient needs first: Designing personalized care in sleep medicine
9:00am – 10:30am I Ballroom A

Chair:
Timothy I. Morgenthaler (United States)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep medicine and the healthcare and patient revolution
Timothy I. Morgenthaler (United States)

9:22am – 9:42am
Learning "what matters to patients": a human-centered design approach to insomnia and sleep health
Lauren Seymour (United States)

9:42am – 10:02am
Improving shared decision making in sleep apnea management: Technological tools and user preferences
Nick Bansback (Canada)

10:02am – 10:22am
My genes, my sleep medicine; genomics and the personalization of sleep medicine
Simon Archer (United Kingdom)

10:22am – 10:30am
Conclusion

S27: New insights into light's non-visual impact on sleep and circadian physiology
9:00am – 10:30am I Rooms 118-120

Chair:
Christian Cajochen (Switzerland)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Effects of altered light schedules on sleep regulation in mice
Vladyslav Vyazovskiy (United Kingdom)

9:18am – 9:34am
Light and sleep homeostasis: A proof of concept study from mice to humans
Patrice Bourgin (France)

9:34am – 9:50am
Daylight replications with LEDs: Effects on sleep, circadian physiology and mood
Oliver Stefani (Switzerland)

9:50am – 10:06am
Natural light, sleep and the circadian clocks in humans
John Axelsson (Sweden)

10:06am – 10:22am
The effect of daytime lighting on the quality of sleep in human: From healthy people to caregivers
Tomoko Wakamura (Japan)

10:22am – 10:30am
Conclusion

S28: Memory processing as a biological drive for sleep? The impact of waking cognition on subsequent sleep: Evidence from basic and clinical research

9:00am – 10:30am I Room 109

Chair:
Francesca Conte (Italy)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Effects of experience and subsequent sleep on visual system function
Sara Aton (United States)

9:18am – 9:34am
The need for sleep: Memory optimization and enhancement. Insights from recent EEG-fMRI studies
Stuart Fogel (Canada)

9:34am – 9:50am
Sleep's impact on semantic memory and creative problem solving
Penelope Lewis (United Kingdom)

9:50am – 10:06am
Sleep quality improvements after pre-sleep training
Francesca Conte (Italy)

10:06am – 10:22am
Effects of cognitive training on sleep quality among older adults with insomnia
Iris Haimov (Israel)

10:22am – 10:30am
Conclusion

S29: REM Sleep and insomnia: So emotional!

9:00am – 10:30am I Rooms 121-122

Chair:
Célyne H. Bastien (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Dream valence and next day mood in individuals with insomnia symptoms
Megan R. Crawford (United Kingdom)

9:22am – 9:42am
REM sleep and arousal
Dieter Riemann (Germany)

9:42am – 10:02am
Maladaptive REM sleep features as mechanisms for establishing PTSD
Gina Poe (United States)

10:02am – 10:22am
Lucid dreaming as an adjunct treatment for insomnia
Jason Ellis (United Kingdom); Célyne H. Bastien (Canada)

10:22am – 10:30am
Conclusion

S30: New sleep circuits and their role in disorders

9:00am – 10:30am I Room 211

Chairs:
Jimmy Fraigne (Canada); Carolina Gutierrez-Herrera (Switzerland)

9:00am – 9:02am
Introduction

9:02am – 09:22am
Dynamic REM sleep modulation by ambient temperature: Critical role of the lateral hypothalamus and the pathological phenotype in narcolepsy
Markus Schmidt (Switzerland)

9:22am – 9:42am
Sleep-regulating midbrain GABAergic circuitry
Yo Oishi (Japan)

9:42am – 10:02am
REM sleep circuit underlying REM sleep behavior disorder
Jimmy Fraigne (Canada)

10:02am – 10:22am
Thalamic contribution to sleep wake and schizophrenia
Carolina Gutierrez-Herrera (Switzerland)

10:22am – 10:30am
Conclusion

S31: Combination therapy approaches for OSA: Can we improve effectiveness?

9:00am – 10:30am I Rooms 212-214

Chair:
Kate Sutherland (Australia)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Combining the two main device therapies: CPAP and oral appliances
Fernanda Almeida (Canada)

9:18am – 9:34am
Targeting both jaw and body position in supine OSA: Oral appliances and positional therapy
Marijke Dieltjens (Belgium)

9:34am – 9:50am
Combining weight loss with CPAP for OSA treatment: Are there any benefits?
Craig Phillips (Australia)

9:50am – 10:06am
Targeting pathophysiological mechanisms for combination therapy options
Scott Sands (United States)

10:06am – 10:22am
Combination drug therapy for the upper airway muscles
Luigi Taranto Montemurro (United States)

10:22am – 10:30am
Conclusion

S32: Cross-cultural sleep: Sleep around the world and across the lifespan
9:00am – 10:30am I Rooms 217-219

Chair:
Jodi Mindell (United States)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep patterns and sleep ecology in young children around the world
Jodi Mindell (United States)

9:22am – 9:42am
Recent worldwide sleep patterns and problems during adolescence: An updated 2019 review and meta-analysis of age, region, and cultural influences
Michael Gradisar (Australia)

9:42am – 10:02am
Epidemiology of sleep disturbances among African, South East Asian and South American adults
Bizu Gelaye (United States)

10:02am – 10:22am
Sleep problems and health in adult populations: A global perspective
Saverio Stranges (Canada)

10:22am – 10:30am
Conclusion

O12: Insomnia mechanisms and pathophysiology
9:00am – 10:30pm I Room 116

Chairs:
Sean Drummond (Australia); Michelle Olaithe (Australia)

9:00am - 9:15am
INSOMNIA AND CARDIORESPIRATORY FITNESS IN A MIDDLE-AGED POPULATION: THE SWEDISH CARDIOPULMONARY BIOIMAGING PILOT STUDY
Ding Zou, Sweden (Sweden)

9:15am - 9:30am
PSYCHOPHYSIOLOGICAL AND PARADOXICAL INSOMNIA: HOW DIFFERENT IS THEIR BRAIN ASYMMETRY? AN EEG STUDY
Thierry Provencher (Canada)

9:30am - 9:45am
INSOMNIA AND COVERT VASCULAR BRAIN DISEASE
Olga Tikhomirova (Russian Federation)

9:45am - 10:00am
NEUROPHYSIOLOGICAL HYPERAROUSAL IN INSOMNIA BASED ON SLOW WAVE ACTIVITY: EVIDENCE OF SUBTYPES
Christopher Gordon (Australia)

10:00am - 10:15am
MODELLING SLEEP ONSET MISPERCEPTION IN INSOMNIA
Lieke Hermans (The Netherlands)

10:15am - 10:30am
FEELING AWAKE DURING SLEEP: A HIGH-DENSITY EEG ASSESSMENT OF SLEEP PERCEPTION IN GOOD SLEEPERS AND PATIENTS WITH PARADOXICAL INSOMNIA
Sandro Lecci (Switzerland)

O13: Restless legs syndrome
9:00am – 10:30pm I Rooms 215-216

Chairs:
John Winkelman (United States); Yuichi Inoue (Japan)

9:00am - 9:01am
Introduction

9:01am - 9:13am
VALIDATION OF THE SELF-ADMINISTERED VERSION OF THE INTERNATIONAL RESTLESS LEGS SYNDROME STUDY GROUP SEVERITY RATING SCALE – THE SIRLS
Denise Sharon (United States)

9:13am - 9:25am
GENDER DIFFERENCES IN CLINICAL, LABORATORY, AND POLYSOMNOGRAPHIC FEATURES OF RESTLESS LEGS SYNDROME
Evi Holzknecht (Austria)

9:25am - 9:37am
SEASONALITY OF RESTLESS LEGS SYNDROME: SYMPTOMS VARIABILITY IN WINTER AND SUMMER TIMES
Evi Holzknecht (Austria)

9:37am - 9:49am
RESTLESS LEGS SYNDROME (RLS) SHOWS INCREASED POST-MORTEM MICROVASCULAR DISEASE IN CORTEX COMPARED TO CONTROLS
Arthur Walters (United States)

9:49am - 10:01am
ONE-YEAR LONGITUDINAL FOLLOW-UP DATA FROM THE NATIONAL RLS OPIOID REGISTRY
John Winkelman (United States)

10:01am - 10:13am
RESTLESS LEG SYNDROME AND CARDIOVASCULAR AND CEREBROVASCULAR DISEASES IN THE CANADIAN LONGITUDINAL STUDY ON AGING
Sheida Zolfaghari (Canada)

10:13am - 10:25am
EVALUATION OF BRAIN IRON DEPOSITS IN RESTLESS LEGS SYNDROME: THE PROMISING ROLE OF TRANSCRANIAL SONOGRAPHY
Celia Garcia Malo (Spain)

10:25am
Question and answer

O14: Circadian
9:00am – 10:30pm I Room 110

Chairs:
Melinda Jackson (Australia); Sonia Ancoli-Israel (United States)

9:00am - 9:15am
CROSS-SECTIONAL AND LONGITUDINAL RELATIONSHIPS BETWEEN REST-ACTIVITY RHYTHMS AND CIRCULATING INFLAMMATORY MARKERS IN OLDER MEN: THE OSTEOPOROTIC FRACTURES IN MEN SLEEP STUDY
Qian Xiao (United States)

9:15am - 9:30am
SLEEP AND FATIGUE IN SHIFT WORK WITH AND WITHOUT NIGHT WORK: LINKAGE TO OBJECTIVE WORKING TIME DATA
Kati Karhula (Finland)

9:30am - 9:45am
SOCIAL JETLAG AND SUICIDAL IDEATION: A POPULATION-BASED CROSS-SECTIONAL STUDY AMONG JAPANESE DAYTIME EMPLOYEES
Akinori Nakata (Japan)

9:45am -10:00am
CAN WE OPTIMISE THE TIMING OF DAYTIME SLEEP TO INCREASE SLEEP DURATION IN HEALTHY ADULTS DURING A WEEK OF SIMULATED NIGHT WORK?
Charli Sargent (Australia)

10:00am - 10:15am
LONGER SEQUENCES OF CONSECUTIVE NIGHT SHIFTS MAY REDUCE THE LIKELIHOOD OF CRASHING WHILE DRIVING HOME FROM WORK
Greg Roach (Australia)

10:15am - 10:30am
PREDICTORS AND CORRELATES OF CHANGES IN SLEEP DURATION OVER 3 YEARS: DATA FROM A COMMUNITY-BASED COHORT
Yu Sun Bin (Australia)

T06: Board of Registered Polysomnographic Technologists: Future of sleep
9:00am – 10:30am I Rooms 223-224

Chair:
Jessica Schmidt (United States)

9:00am - 9:02am
Introduction

9:02am - 9:18am
Future of sleep: Disruptive trends
Vikas Jain (United States)

9:18am - 9:34am
Evolving role of sleep health professionals
Andrea Ramberg (United States)

9:34am - 9:50am
Growing your sleep health career / profession
Jomo Nkunika (United States)

9:50am - 10:06am
Technology's impact on the future of sleep
Amber Allen (United States)

10:06am - 10:22am
Are microcredentials relevant to the sleep world
Becky Appenzeller (United States)

10:22am - 10:30am
Question and answer

A08:SRS-CSS Frontiers: Sleeping well and staying in rhythm
9:00am – 10:00am I Rooms 220-222

9:00am - 10:00am
Sleeping Well and Staying in Rhythm: Implications for Brain and Metabolic Health
Phyllis Zee (United States)

Exhibition
10:00am – 4:00pm I Exhibition

A09: SRS-CSS Frontiers: Sleep: Impact on physiology and public health
10:15am – 12:00pm I Rooms 220-222

Chairs:
John Peever (Canada); Kristen Knutson (United States)

10:15am – 10:40am
Inflammatory and counter-inflammatory responses to chronic sleep disruption in humans
Monika Haack (United States)

10:40am – 11:05am
Sleep, recovery and human performance in elite athletes
Charles Samuels (Canada)

11:05am – 11:30am
The epidemiology of sleep and population health implications
Chandra L. Jackson (United States)

11:30am – 11:55am
Human sleep in comparative context: Exploring the link between our evolutionary history, health, and well-being
David Samson (Canada)

S33: Orexin receptor antagonists in the treatment of insomnia
10:45am – 12:15pm I Ballroom A

Chairs:
Clete Kushida (United States); Yuichi Inoue (Japan)

10:45am - 10:47am
Introduction

10:47am - 11:07am
The indication and limitation of BZDs and Z-drugs
Yuichi Inoue (Japan)

11:07am - 11:27am
Melatonergic drugs: Chronobiotic vs soporific effects in the management of insomnia
Phyllis Zee (United States)

11:27am - 11:47am
Orexin receptor antagonists in the treatment of insomnia
Andrew Krystal (United States)

11:47am - 12:07pm
Combined CBT and medication therapies for optimal management of insomnia
Charles Morin (Canada)

12:07pm - 12:15pm
Question and answer

S34: Sensory–motor network of the restless legs syndrome (RLS): Electrophysiology and imaging
10:45am – 12:15pm I Room 109

Chair:
Richard Allen (United States)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Restless legs syndrome as a network disorder
Yong Won Cho (Republic of Korea)

11:03am – 11:19am
The mechanism of sensory disorder in RLS based on MEG
Yuping Wang (China)

11:19am – 11:35am
Non-invasive brain stimulation and RLS: Clinical, electrophysiological and neuroplastic effects
Giuseppe Lanza (Italy)

11:35am – 11:51am
The sensory experience of RLS and its relationship to pain, itch and Tourette's
John Winkelman (United States)

11:51am – 12:07pm
Peripheral mechanisms in restless legs syndrome
Dirk Czesnik (Germany)

12:07pm – 12:15pm
Conclusion

S35: Progression of childhood sleep-disordered breathing - natural and after intervention

10:45am – 12:15pm I Rooms 121-122

Chair:
Albert Martin Li (Hong Kong)

10:45am – 10:47am
Introduction

10:47am – 11:03am
What happens to a child with primary snoring with time, is he morbidity free?
Chun Ting Au (Hong Kong)

11:03am – 11:19am
Longitudinal follow-up data from a Chinese cohort to examine predictors of SDB resolution
Kate Chan (Hong Kong)

11:19am – 11:35am
Findings from Penn State longitudinal cohort to evaluate predictors for incident SDB
Edward Bixler (United States)

11:35am – 11:51am
The cohort study of Pediatric OSA following surgical treatment
Yu-Shu Huang (Taiwan)

11:51am – 12:07pm
Are OSA related complications reversible following intervention?
Rosemary Horne (Australia)

12:07pm – 12:15pm
Conclusion

S36: What else can we learn from sleep oscillations?

10:45am – 12:15pm I Room 211

Chairs:
Antoine Adamantidis (Switzerland); Vladyslav Vyazovskiy (United Kingdom)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Cellular dynamics of thalamo-cortical circuits across sleep states
Antoine Adamantidis (Switzerland)

11:07am – 11:27am
Local and global aspects of sleep homeostasis
Vladyslav Vyazovskiy (United Kingdom)

11:27am – 11:47am
Brain oscillations, sleep states and consciousness
Melanie Boly (United States)

11:47am – 12:07pm
High-density EEG in sleep and mental disorders
Ruth M. Benca (United States)

12:07pm – 12:15pm
Conclusion

S37: Novel biomarkers in sleep and circadian research: Requirements and real-world applications

10:45am – 12:15pm I Rooms 212-214

Chair:
Simon Archer (United Kingdom)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Biomarkers for circadian rhythmicity: Considerations for development and validation
Jeanne Duffy (United States)

11:03am – 11:19am
Biomarkers for sleep: Considerations for development and validation
Janet Mullington (United States)

11:19am – 11:35am
Microbiome related biomarkers of alertness during sleep and circadian disruption
Kenneth Wright (United States)

11:35am – 11:51am
Baseline predictors of drowsy driving performance
Joshua J. Gooley (Singapore)

11:51am – 12:07pm
Blood transcriptome-based biomarkers for the multi-level assessment of sleep and circadian perturbations in humans
Emma Laing (United Kingdom)

12:07pm – 12:15pm
Conclusion

S38: Sleep in elite athletes: Implications for performance and recommendations for optimal recovery

10:45am – 12:15pm I Rooms 215-216

Chairs:
Shona Halson (Australia); Jacopo A. Vitale (Italy)

10:45am – 10:47am
Introduction

10:47am – 11:03am
The influence of chronotype and training schedules on athletes' sleep
Jacopo A. Vitale (Italy)

11:03am – 11:19am
How to assess athletes' sleep? The pros and cons of common methods
Mathieu Nedelec (France)

11:19am – 11:35am
The impact of long-haul travel on sleep and evidence-based solutions
Meeta Singh (United States)

11:35am – 11:51am
To nap or not to nap? Possible benefits and risks for athletes
Michele Lastella (Australia)

11:51am – 12:07pm
State of the art on non-invasive sleep hygiene strategies to improve athletes' sleep
Shona Halson (Australia)

12:07pm – 12:15pm
Conclusion

S39: Update on non OSA sleep breathing abnormalities: Upper airway resistance syndrome and inspiratory flow limitation

10:45am – 12:15pm I Room 110

Chairs:
Luciana Palombini (Brazil); Dalva Poyares (Brazil)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Defining UARS: Which parameters should be scored? RERAs, IFL or both?
JL Pepin (France)

11:03am – 11:19am
UARS data from Follow Up of Sao Paulo epidemiological study
Luciana Palombini (Brazil)

11:19am – 11:35am
What are the evidences currently available that UARS is a distinct syndrome?
JL Pepin (France)

11:35am – 11:51am
Discussion IFL: update on evidences and perspectives for consensus on the analysis and scoring of IFL in PSG among sleep specialists
David Rapoport (United States)

11:51am – 12:07pm
Is there a specific UARS phenotype?
Avram Gold (United States)

12:07pm – 12:15pm
Conclusion

O15: Dental

10:45am – 12:15pm I Rooms 116-117

Chairs:
Gilles Lavigne (Canada); Peter Cistulli (Australia)

10:45am - 11:00am
SLEEP DISTURBANCE AS A CAUSATIVE FACTOR OF INFLAMMATION AND COMORBIDITIES IN HIGH DISABILITY TEMPOROMANDIBULAR DISORDERS
Ji Woon Park (Republic of Korea)

11:00am - 11:15am
PREDICTION OF SLEEP BRUXISM DIAGNOSIS WITH CONCOMITANT INSOMNIA COMPLAINTS IN A MID-AGE SUB-GROUP: GENERAL POPULATION OBSERVED AT 8 YEARS INTERVAL
Milton Maluly-Filho (Brazil)

11:15am - 11:30am
MAXILLOMANDIBULAR ADVANCEMENT FOR OBSTRUCTIVE SLEEP APNEA: DOES PREVIOUS PALATAL SURGERY AFFECT THE OUTCOME?
Hung Tuan Lau (Singapore)

11:30am - 11:45am
LONG TERM OUTCOME AND CEPHALOMETRIC ANALYSIS OF MAXILLOMANDIBULAR ROTATIONAL ADVANCEMENT SURGERY FOR TREATMENT OF OBSTRUCTIVE SLEEP APNOEA IN ASIAN PATIENTS
Shaun RH Loh (Singapore)

11:45am - 12:00pm
CONTINUOUS POSITIVE AIRWAY PRESSURE VERSUS MANDIBULAR ADVANCEMENT SPLINTS IN OBSTRUCTIVE SLEEP APNEA PATIENTS:A RANDOMIZED TRIAL
Mona M Hamoda (Canada)

12:00pm - 12:15pm
THE IMPACT OF UPPER AIRWAY SURGERY ON THE PATHOPHYSIOLOGICAL TRAITS CAUSING OBSTRUCTIVE SLEEP APNEA (OSA)
Ai-Ming Wong (Australia)

D04: Melatonin use in children: The promise and the peril
10:45am – 12:15pm I Rooms 118-120

Chairs:
Judith Owens (United States)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Update on the neurophysiology of melatonin in children and adolescents
Jonathan Lipton (United States)

11:03am – 11:19am
Safety of short term and long term pharmacologic treatment with melatonin in children
Ingeborg van Geijlswijk (The Netherlands)

11:19am – 11:35am
Melatonin in children with autism and neurodevelopmental disorders: The latest evidence
Paul Gringras (United Kingdom)

11:35am – 11:51am
Establishing clinical guidelines for melatonin use in children
Oliviero Bruni (Italy)

11:51am – 12:07pm
"Vitamin M": Melatonin and insomnia in children
Judith Owens (United States)

12:07pm – 12:15pm
Conclusion

T07: Medications and pharmacological effects on PSG
10:45am – 11:30pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

10:45pm – 11:30am
Medications and pharmacological effects on PSG
Christoph Schoebel (Germany)

T08: Quality assurance in the sleep lab
11:30am – 12:30pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

11:30am - 12:30pm
Quality assurance in the sleep lab
Marietta Bibbs (United States)

Clinical update in servo-ventilation
12:30pm – 2:00pm I Rooms 217-219

12:30pm - 12:35pm
Introduction
Cheryl Needham (United States)

12:35pm - 1:10pm
Comparison of various forms of PAP therapies in sleep-disordered breathing
Colleen Lance (United States)

1:10pm - 1:45pm
Update on the ADVENT-HF trial
Douglas Bradley (Canada)

1:45pm - 2:00pm
Question and Answer

Excessive daytime sleepiness in patients with OSA: Impact, causes and treatment strategies
12:30pm – 2:00pm I Ballroom A

Chair:
Richard Bogan (United States)

12:30pm – 12:35pm
Introduction
Richard Bogan (United States)

12:35pm – 1:00pm
OSA patients with residual daytime sleepiness: Who are the patients? What are the causes?
Patrick Strollo (United States)

1:00pm – 1:25pm
Treatment of residual daytime sleepiness in OSA patients
Atul Malhotra (United States)

1:25pm – 1:50pm
Case presentations
Richard Bogan (United States)

1:50pm – 2:00pm
Take-home tips for clinical practice

Harmony Biosciences Industry Satellite Symposium
12:30pm – 2:00pm I Room 118-120

Insomnia in Alzheimer's disease: Sleep matters
12:30pm – 2:00pm I Rooms 220-222

12:30pm - 12:35pm
Introduction
Charles Morin (Canada)

12:35pm - 12:55pm
Insomnia in the elderly – Night and day impact on patients and caregivers
Charles Morin (Canada)

12:55pm - 1:15pm
Assessing sleep issues in patients with dementia
Phyllis Zee (United States)

1:15pm - 1:35pm
Managing insomnia in Alzheimer's Disease
Alon Avidan (United States)

1:35pm - 2:00pm
Question & answer
Charles Morin (Canada)

DREEM: Insomnia workshop
1:00pm – 1:45pm I Room 110

K06: Discussing the impact of obstructive sleep apnea and sleep duration: Time to put the pieces together
2:00pm – 2:45pm I Ballroom A

2:00pm - 2:02pm
Introduction
Matt Naughton (Australia)

2:02pm - 2:45pm
Keynote Presentation
Luciano Drager (Brazil)

K07: Toward the mysteries of sleep
2:00pm – 2:45pm I Room 211

2:00pm - 2:02pm
Introduction
Pierre-Hervé Luppi (France)

2:02pm - 2:45pm
Keynote Presentation
Masashi Yanagisawa (Japan)

Meet the Professor: R. Bogan, P. Strollo, A Malhotra
2:00pm – 2:45pm I Rooms 121-122

Chair:
Richard Bogan (United States)

2:00pm - 2:45pm
Panel Discussion
Patrick Strollo (United States); Atul Malhotra (United States); Richard Bogan (United States)

K08: Restless legs syndrome/periodic limb movements of sleep: New insights into neurobiology and treatment
2:00pm – 2:45pm I Rooms 212-214

2:00pm - 2:02pm
Introduction
Birgit Högl (Austria)

2:02pm - 2:45pm
Restless legs syndrome/periodic limb movements of sleep: New insights into neurobiology and treatment
Diego García-Borreguero (Spain)

T09: Complex sleep apnea
2:00pm – 3:30pm I Rooms 223-224

Chairs:
Shalanda Mitchell (United States); Michael Eden (United States)

2:00pm - 3:30pm
Complex sleep apnea
Richard Castriotta (United States)

S40: New insights into the pathophysiology, clinical manifestations and treatment of sleep related eating disorder
3:00pm – 4:30pm I Ballroom A

Chairs:
John Winkelman (United States); Yuichi Inoue (Japan)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
The borderlands of sleep related eating disorder
Carlos Schenck (United States)

3:18pm – 3:34pm
The associated factors of SRED in the general population
Yuichi Inoue (Japan)

3:34pm – 3:50pm
Sleep related eating disorder in psychiatric populations
Yun Kwok Wing (Hong Kong)

3:50pm – 4:06pm
Meal timing: Circadian control and metabolic consequences
Frank Scheer (United States)

4:06pm – 4:22pm
What works for the treatment of sleep-related eating disorder
John Winkelman (United States)

4:22pm – 4:30pm
Conclusion

S41: Patient selection for adenotonsillectomy- what can the RCTs teach us and what's the way forward?
3:00pm – 4:30pm I Room 109

Chairs:
Gillian Nixon (Australia); Evelyn Constantin (Canada)

3:00pm – 3:05pm
Introduction

3:05pm – 3:20pm
The impact of AT in pre-schoolers- results of the POSTA study
Karen Waters (Australia)

3:20pm – 3:35pm
The key lessons from CHAT for predicting surgical outcome
Carol Rosen (United States)

3:35pm – 3:50pm
Choosing candidates for AT- a surgeon's perspective
Robert Black (Australia)

3:50pm – 4:05pm
What's the way forward? Controversies, dilemmas and future research agendas
Catherine Hill (United Kingdom)

4:05pm – 4:30pm
Panel discussion/Q&A

S42: Treatment of insomnia in co-morbid obstructive sleep apnea and insomnia
3:00pm – 4:30pm I Rooms 121-122

Chair:
Leon Lack (Australia)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
The combination of CBTi and CPAP therapy in the treatment of co-morbid insomnia and sleep apnea
Alexander Sweetman (Australia)

3:22pm – 3:42pm
Treating COMISA in a multidisciplinary sleep clinic: Does sequence of treatment matter?
Jason C. Ong (United States)

3:42pm – 4:02pm
Online and in-person Cognitive Behavioral Therapy for insomnia co-occurring with sleep apnea
Jack Edinger (United States)

4:02pm – 4:22pm
Using sleep coaches to provide integrated behavioral treatment for insomnia and PAP adherence in US veterans
Cathy Alessi (United States)

4:22pm – 4:30pm
Conclusion

S43: Genetic and epidemiological triggers of sleepiness: From natural variation to severe sleep disorders

3:00pm – 4:30pm I Room 211

Chair:
Hanna M. Ollila (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Genetic association analyses for excessive daytime sleepiness
Brian Cade (United States)

3:18pm – 3:34pm
USF1 ties metabolism to chronotype and sleepiness
Nasa Sinnott-Armstrong (United States)

3:34pm – 3:50pm
Kleine Levin Syndrome is strongly associated with variants at TRANK1 locus and genes involved in the regulation of rhythmic behaviours
Emmanuel Mignot (United States)

3:50pm – 4:06pm
Electronic health records define novel genetic and environmental triggers for sleepiness and narcolepsy
Hanna M. Ollila (United States)

4:06pm – 4:22pm
CD8 T-cell autoreactivity in type 1 narcolepsy
Birgitte Kornum (Denmark)

4:22pm – 4:30pm
Conclusion

S44: Upper airway physiology and new treatment in patients with OSA

3:00pm – 4:30pm I Rooms 212-214

Chair:
Yuanming Luo (China)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Endoscopic laryngeal assessment: What is it and can it help those prescribing PAP therapy
Michael Polkey (United Kingdom)

3:18pm – 3:34pm
Coordination between respiratory pump and upper airway muscles in OSA
Yuanming Luo (China)

3:34pm – 3:50pm
New insights into mechanisms of arousal and airway opening and implications for OSA phenotypes
Peter Catcheside (Australia)

3:50pm – 4:06pm
Treatment of sleep apnea with transvenous electrical stimulation
Xilong Zhang (China)

4:06pm – 4:22pm
New development of drug targeting on upper airway dilator muscles in OSA
Andrew Wellman (United States)

4:22pm – 4:30pm
Conclusion

S45: New perspectives in the management of pediatric narcolepsy

3:00pm – 4:30pm I Rooms 217-219

Chairs:
Michel Lecendreux (France)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Clinical features in the narcoleptic child: How clinical evaluation may orientate towards therapeutic decisions
Giuseppi Plazzi (Italy)

3:18pm – 3:34pm
Pediatric narcolepsy, auto-immunity and potential therapeutic outcomes
Lucie Barateau (France)

3:34pm – 3:50pm
Pediatric narcolepsy and psychiatric features and treatment issues
Paul Gringras (United Kingdom)

3:50pm – 4:06pm
Management of the pediatric narcoleptic patient
Michel Lecendreux (France)

4:06pm – 4:22pm
Directions for the future, what can we expect regarding narcolepsy and other disorders of EDS based on current research?
Yves Dauvilliers (France)

4:22pm – 4:30pm
Conclusion

O16: Treatments CPAP and nonCPAP

3:00pm – 4:30pm I Rooms 116-117

Chairs:
Robert Skomro (Canada); Atul Malhotra (United States)

3:00pm - 3:15pm
RESPONSIVENESS OF PATIENT REPORTED OUTCOMES TO OBSTRUCTIVE SLEEP APNEA TREATMENT WITH CONTINUOUS POSITIVE AIRWAY PRESSURE THERAPY
Lucas Donovan (United States)

3:15pm - 3:30pm
BILATERAL HYPOGLOSSAL NERVE STIMULATION FOR TREATMENT OF OBSTRUCTIVE SLEEP APNEA
Peter Eastwood (Australia)

3:30pm - 3:45pm
THE EFFECT OF OBSTRUCTIVE SLEEP APNEA AND CPAP THERAPY ON THE PULMONARY EMBOLISM RECURRENCE
Emir Festic (United States)

3:45pm - 4:00pm
THE EFFECT OF COGNITIVE AND BEHAVIOURAL THERAPY FOR INSOMNIA ON CHANGES IN SLEEP ARCHITECTURE AND AHI IN PATIENTS WITH CO-OCCURRING INSOMNIA AND SLEEP APNEA
Alexander Sweetman (Australia)

4:00pm - 4:15pm
THE COMPARATIVE EFFECTIVENESS OF A SIMPLE ALARM-BASED SUPINE-AVOIDANCE DEVICE VERSUS USUAL CARE WITH CONTINUOUS POSITIVE AIRWAY PRESSURE FOR TREATING PATIENTS WITH SUPINE PREDOMINANT OBSTRUCTIVE SLEEP APNEA
Matthew Rahimi (Australia)

4:15pm – 4:30pm
A NOVEL RISK INDEX FOR PREDICTING CENTRAL SLEEP APNEA IN CHRONIC PAIN PATIENTS ON OPIOIDS
Jean Wong (Canada)

O17: Sleep, Behavior and Cognition

3:00pm – 4:30pm I Rooms 215-216

Chairs:
Romola Bucks (Australia); Kimberly Cote (Canada)

3:00pm – 3:15pm
ABNORMAL VESTIBULAR EVOKED MYOGENIC POTENTIALS ARE CORRELATED WITH REM SLEEP WITHOUT ATONIA IN PATIENTS WITH ISOLATED REM SLEEP BEHAVIOR DISORDER
Raffaele Ferri (Italy)

3:15pm – 3:30pm
TECHNOLOGY ASSISTED BEHAVIOR INTERVENTION TO EXTEND SLEEP AMONG ADULTS WITH SHORT SLEEP DURATION AND PREHYPERTENSION/STAGE 1 HYPERTENSION: A RANDOMIZED PILOT FEASIBILITY STUDY
Kelly Baron (United States)

3:30pm – 3:45pm
CUTANEOUS ALPHA-SYNUCLEIN DEPOSITION IN IDIOPATHIC REM SLEEP BEHAVIORAL DISORDER
Mitchell Miglis (United States)

3:45pm - 4:00pm
SUBJECTIVE AWARENESS OF DROWSINESS: TEMPORAL DYNAMICS OF SUBJECTIVE AND OBJECTIVENESS SLEEPINESS ACROSS SLEEP DEPRIVATION
Jessica Manousakis (Australia)

4:00pm - 4:15pm
REM SLEEP BEHAVIOR DISORDER IN PARKINSON'S DISEASE: A MODEL FOR IDENTIFICATION AND PREDICTION OF ITS PROGRESSION FROM THE PRODROMAL STAGE
Matteo Cesari (Denmark)

4:15pm - 4:30pm
QUANTITATIVE ANALYSES OF REM SLEEP WITHOUT ATONIA IN PATIENTS WITH LGI1 AND CASPR2 AUTOIMMUNITY
Michelle F. Devine (United States)

O18: ESRS/WSS co-hosted young or new investigator award

3:00pm – 4:30pm I Room 110

Chairs:
Walter McNicolas (Ireland); Charles Morin (Canada)

3:00pm – 3:15pm
EFFECT OF THE SELECTIVE MELATONIN MT1 RECEPTOR PARTIAL AGONIST UCM871 IN THE ACTIVITY OF NORAPHINEPRINE NEURONS OF THE LOCUS COERULEUS DURING THE SLEEP/WAKE CYCLE
Martha Lopez-Canul (Canada)

3:15pm – 3:30pm
PERIODIC LIMB MOVEMENT DURING SLEEP AND THE INCIDENCE OF CARDIOMETABOLIC OUTCOMES: THE HYPNOLAUS STUDY
Camila Hirotsu (Switzerland)

3:30pm – 3:45pm
MULTIMODAL MRI REVEALS ALTERATIONS OF SENSORIMOTOR CIRCUITS IN RESTLESS LEGS SYNDROME
Ambra Stefani (Austria)

3:45pm - 4:00pm
A ROLE FOR ASTROGLIAL CALCIUM ACTIVITY IN SLEEP AND SLEEP HOMEOSTASIS
Ashley Ingiosi (United States)

4:00pm - 4:15pm
MICROGLIA ELIMINATION CAUSED PROLONGED INCREASES IN SLEEP FOLLOWING BOTH PERIPHERAL AND CENTRAL INFLAMMATORY CHALLENGES IN THE MOUSE
Rachel Rowe (United States)

4:15pm - 4:30pm
EFFECTS OF SLEEP EXTENSION ON DAYTIME BLOOD PRESSURE IN SLEEP-DEPRIVED ADOLESCENTS
Chun Ting Au (Hong Kong)

A10: SRS-CSS Frontiers: Obstructive sleep apnea and the risk of cognitive decline in older adults

3:00pm – 4:00pm I Rooms 220-222

3:00pm – 4:00pm
Obstructive sleep apnea and the risk of cognitive decline in older adults
Nadia Gosselin (Canada)

D05: The International Sleep Research Training Program (ISRTP) of World Sleep Society

3:00pm – 4:30pm I Rooms 118-120

Chair:
Clete Kushida (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:12pm
Sleep research opportunities at Stanford University
Clete Kushida (United States)

3:12pm – 3:22pm
Sleep research opportunities at Harvard University
Susan Redline (United States)

3:22pm – 3:32pm
Sleep research opportunities at the University of Oxford
Simon Kyle (United Kingdom)

3:32pm – 3:42pm
Sleep research opportunities at the University of Pennsylvania
Allan Pack (United States)

3:42pm – 3:52pm
Sleep research opportunities at the University of Sydney
Brendon Yee (Australia)

3:52pm – 4:02pm
Sleep research opportunities in Brazil
Dalva Poyares (Brazil)

4:02pm – 4:12pm
Sleep research opportunities in Germany
Thomas Penzel (Germany)

4:12pm – 4:22pm
Current trainee experience
Liyue Xu (China)

4:22pm – 4:30pm
Conclusion

T10: Residual EDS with CPAP; MSLT and/or MWT (workshop)

3:45pm – 5:00pm I Rooms 223-224

Chairs:
Shalanda Mitchell (United States); Michael Eden (United States)

3:45pm – 5:00pm
Residual EDS with CPAP; MSLT and/or MWT
Michael Eden (United States)

A11: SRS-CSS Frontiers: Sleep: Impact on neurological function

4:15pm – 6:00pm I Rooms 220-222

Chairs:
Kristen Knutson (United States); John Peever (Canada)

4:15pm – 4:40pm
Chronic sleep loss neural injury: Play early, pay later
Sigrid Veasey (United States)

4:40pm – 5:05pm
Links between global and local sleep disruption and Alzheimer's disease pathophysiology
Bryce Mander (United States)

5:05pm – 5:30pm
REM sleep behavior disorder: Animal models and the neuronal network involved
Pierre-Hervé Luppi (France)

5:30pm – 5:55pm
Obstructive sleep apnea and Alzheimer Disease: Is amyloid the link between breathing and dementia?
Yo-El Ju (United States)

S46: Central sleep apnea: PAP, ASV or Phrenic Nerve Stimulation?

4:30pm – 6:00pm I Ballroom A

Chair:
Neomi Shah (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Epidemiology of sleep apnea in heart failure
Neomi Shah (United States)

4:48pm – 5:04pm
CPAP for central sleep apnea
Douglas Bradley (Canada)

5:04pm – 5:20pm
ASV for central sleep apnea
Virend Somers (United States)

5:20pm – 5:36pm
Phrenic nerve stimuation for central sleep apnea
David Rapoport (United States)

5:36pm – 5:52pm
Summary & discussion
Virend Somers (United States); Neomi Shah (United States)

5:52pm – 6:00pm
Conclusion

S47: From past, present, to precision: Contemporary sleep surgery

4:30pm – 6:00pm I Room 109

Chairs:
Stanley Yung-Chuan Liu (United States); Clemens Heiser (Germany)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Drug induced sleep endoscopy: Does it direct treatment? How else can we use it?
Nico de Vries (The Netherlands)

4:48pm – 5:04pm
Palate surgery
Olivier Vanderveken (Belgium)

5:04pm – 5:20pm
Tongue surgery
Peter Baptista (Spain)

5:20pm – 5:36pm
Upper airway stimulation
Clemens Heiser (Germany)

5:36pm – 5:52pm
Skeletal surgery
Stanley Yung-Chuan Liu (United States)

5:52pm – 6:00pm
Conclusion

S48: Insomnia and performance: From school age to workplace

4:30pm – 6:00pm I Rooms 121-122

Chair:
Célyne H. Bastien (Canada)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
Sleepy Children: The impact of sleep restriction on daytime functioning
Penny Corkum (Canada)

4:52pm – 5:12pm
The associations between sleep and academic performance in adolescents with insomnia
Reut Gruber (Canada)

5:12pm – 5:32pm
Depressive and anxiety symptoms in college students: Insomnia and performance
Célyne H. Bastien (Canada)

5:32pm – 5:52pm
The impact of CBT for insomnia on workplace productivity; meta analysis of RCT data on a digital intervention
Colin Espie (United Kingdom)

5:52pm – 6:00pm
Conclusion

S49: Advances in the analysis of clinical polysomnography data

4:30pm – 6:00pm I Room 211

Chairs:
Susan Redline (United States); Magdy Younes (Canada)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
Heart rate variability during polysomnography: Methods of assessment and clinical relevance
Thomas Penzel (Germany)

4:52pm – 5:12pm
EEG analysis: More than just sleep architecture (new EEG biomarkers)
Magdy Younes (Canada)

5:12pm – 5:32pm
Utilizing PSG signals to characterize obstructive sleep apnea subtypes and severity
Diego Mazzotti (United States)

5:32pm – 5:52pm
Leveraging existing polysomnographic datasets for discovery and replication
Susan Redline (United States)

5:52pm – 6:00pm
Conclusion

S50: Sleep, stroke and vascular dementia

4:30pm – 6:00pm I Rooms 212-214

Chair:
Melissa C. Lipford (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
The evolution of sleep disordered breathing after stroke
Devin L. Brown (United States)

4:52pm – 5:12pm
Treating sleep apnea in the stroke patient: Alternative therapies when PAP isn't an option
Timothy I. Morgenthaler (United States)

5:12pm – 5:32pm
Sleep apnea and vascular dementia of the binswanger type: A brewing storm
Antonio Culebras (United States)

5:32pm – 5:52pm
Relationships between RLS/PLMS and Cerebrovascular Disease
Mark Boulos (Canada)

5:52pm – 6:00pm
Conclusion

S51: Sleep in space

4:30pm – 6:50pm I Rooms 217-219

Chair:
Ivana Rosenzweig (United Kingdom)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Causes and consequences of sleep deficiency during spaceflight
Erin Flynn-Evans (United States)

4:48pm – 5:04pm
Sleep in space
Chrysoula Kourtidou Papadeli (Greece)

5:04pm – 5:20pm
The effect of circadian phase on sleep outcomes and medication use during spaceflight
Erin Flynn-Evans (United States)

5:20pm – 5:36pm
Extended simulated microgravity disrupts sleep and the temporal organization of the human blood transcriptome
Simon Archer (United Kingdom)

5:36pm – 5:52pm
Functional neuroimaging and physiological network advances in sleep neuroscience for extreme environments and its terrestrial applications
Christos Frantzidis (Greece)

5:52pm – 6:08pm
The effect of gravity on REM sleep
Alain Gonfalone (France)

6:08pm – 6:24pm
Changes in sleep rhythms and architecture under conditions of microgravity
Ivana Rosenzweig (United Kingdom)

6:24pm – 6:50pm
Conclusion

O19: Excessive daytime sleepiness and hypersomnia

4:30pm – 6:00pm I Rooms 116-117

Chairs:
Michael Thorpy (United States); Yves Dauvilliers (France)

4:30pm - 4:45pm
TAU-PET SIGNAL ELEVATION IN SELECTIVE BASAL FOREBRAIN NUCLEI IS ASSOCIATED WITH EXCESSIVE DAYTIME SLEEPINESS IN COGNITIVELY UNIMPAIRED MIDDLE AGED AND OLDER ADULTS
Diego Carvalho (United States)

4:45pm - 5:00pm
MEASUREMENT OF SYMPTOMS IN IDIOPATHIC HYPERSOMNIA: THE IDIOPATHIC HYPERSOMNIA SEVERITY SCALE
Isabelle Jaussent (France)

5:00pm - 5:15pm
SLEEP STABILIZATION PATTERNS DEFINE PEDIATRIC CNS HYPERSOMNIA CONDITIONS
Kiran Maski (United States)

5:15pm - 5:30pm
ADDITIVE EFFECT OF VISUAL FIELD DEFECT AND DAYTIME SLEEPINESS ON MOTOR VEHICLE CRASHES AMONG JAPANESE TAXI DRIVERS
Kiyohide Tomooka (Japan)

5:30pm - 5:45pm
DIFFERENTIATING SLEEPY AND NON-SLEEPY OBSTRUCTIVE SLEEP APNEA PATIENTS USING NOCTURNAL PULSE OXIMETRY AND DEEP LEARNING
Samu Kainulainen (Finland)

5:45pm - 6:00pm
NOCTURNAL SLEEP FRAGMENTATION AND CSF OREXIN LEVELS IN HUMANS: SLEEP AND WAKE BOUTS
Lucie Barateau (France)

O20: Mechanisms and sleep loss

4:30pm – 6:00pm I Rooms 215-216

Chairs:
Derk-Jan Dijk (United Kingdom); Igor Timofeev (Canada)

4:30pm - 4:45pm
SLOW WAVE SLEEP IS AN ALTERED, NOT A REDUCED, STATE OF CONSCIOUSNESS: RESTING STATE NETWORK FUNCTIONAL CONNECTIVITY IN SLEEP
Stuart Fogel (Canada)

4:45pm - 5:00pm
A NUCLEUS IN THE MIDBRAIN FOR SLEEP-PROMOTION AND REGULATION OF SLEEP HOMEOSTASIS
Su-Rong Yang (China)

5:00pm - 5:15pm
TASK-DEPENDENT EFFECTS OF THE WAKE MAINTENANCE ZONE ON COGNITION AND ALERTNESS, WITH AND WITHOUT SLEEP LOSS
William McMahon (Australia)

5:15pm - 5:30pm
CROSS-PARTICIPANT PREDICTION OF VIGILANCE STAGES THROUGH THE COMBINED USE OF WPLI AND WSMI EEG FUNCTIONAL CONNECTIVITY METRICS
Laura Sophie Imperatori (Italy)

5:30pm - 5:45pm
SLEEP SPINDLE QUALITY REFLECTS SPATIO-TEMPORAL DYNAMICS OF OSCILLATORY ACTIVITY WITHIN CORTICAL NETWORKS
Cristina Blanco-Duque (United Kingdom)

5:45pm - 6:00pm
UNDER SLEPT AND OVERANXIOUS: THE NEURAL CORRELATES OF SLEEP-LOSS INDUCED ANXIETY IN THE HUMAN BRAIN
Eti Ben Simonr (United States)

O21: SBD Measurement

4:30pm – 6:00pm I Room 110

Chairs:
Erna Sif Arnardottir (Iceland); Kerri Melehan (Australia)

4:30pm - 4:45pm
SLEEP APNEA DIAGNOSIS BASED ON RESPIRATORY RELATED MOVEMENTS
Maziar Hafezi (Canada)

4:45pm - 5:00pm
A POPULATION-BASED STUDY OF PRIMARY CENTRAL SLEEP APNEA
Ioanna Kouri (United States)

5:00pm - 5:15pm
DRUG INDUCED SLEEP ENDOSCOPY: IS THERE A DIFFERENCE IN THE DEGREE OF COLLAPSIBILITY AT DIFFERENT SEDATION LEVELS?
Yao Guang Leow (Singapore)

5:15pm - 5:30pm
BREATHING SOUND AND ANTHROPOMETRIC FEATURES IN COMBINATION ARE PREDICTIVE OF THE POLYSOMNOGRAPHY PARAMETERS
Ahmed Elwali (Canada)

5:30pm - 5:45pm
NEURAL NETWORK ANALYSIS OF NOCTURNAL SPO2 SIGNAL ENABLES EASY SCREENING OF SLEEP APNEA IN ACUTE STROKE AND TRANSIENT ISCHEMIC ATTACK PATIENTS
Akseli Leino (Finland)

5:45pm - 6:00pm
RANDOM FOREST ANALYSIS OF TRACHEAL BREATHING SOUNDS FOR PREDICTING OBSTRUCTIVE SLEEP APNEA
Farahnaz Hajipour (Canada)

D06: And you thought CPAP adherence was hard: Weight management for patients with obstructive sleep apnea
4:30pm – 6:00pm I Rooms 118-120

Chair:
Robert L. Owens (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Beyond the AHI: What else gets better with weight loss?
Indira Gurubhagavatula (United States)

4:48pm – 5:00pm
Impact of diet/exercise/behavior modification on weight in OSA
Susan Bartlett (Canada)

5:04pm – 5:20pm
A chance to cut is a chance to heal: Impact of surgery on weight in OSA
Sanjay R. Patel (United States)

5:20pm – 5:36pm
Red pill vs blue pill?: Impact of pharmacotherapy on weight in OSA
Daniel Besseson (United States)

5:36pm – 5:52pm
Delivering weight loss in a sleep clinic
Ron Grunstein (Australia)

5:52pm – 6:00pm
Conclusion

Poster session 3
5:30pm – 7:00pm I Exhibition

A12: Australasian Sleep Association (ASA) affiliated symposium
6:30pm – 8:00pm I Room 110

Chairs:
Maree Barnes (Australia); Melinda Jackson (Australia)

6:30pm - 6:40pm
Welcome

6:40pm - 7:00pm
Current insomnia research at the Woolcock
Delwyn Bartlett (Australia)

7:00pm - 7:20pm
Intensive sleep re-training: A novel and effective behavioral treatment of insomnia
Leon Lack (Australia)

7:20pm - 7:40pm
Cognitive profiles in short-sleep and paradoxical insomnia: An examination in the Raine Study Cohort
Michelle Olaithe (Australia)

7:40pm - 8:00pm
Preliminary data from Project REST: A partner-assisted CBT-I trial.
Sean Drummond (Australia)

Canadian Sleep Society (CSS) Annual General Membership Meeting
6:30pm – 9:00pm I Room 202
CSS member registration opens at 6:30PM

6:30pm - 7:30pm
Cocktail reception

7:05pm
Special announcement of the launch of the National Campaign on Sleep (CSCN)

7:15pm
Food available

7:30pm – 9:00pm
AGM

A13: International Hypersomnolence Investigative Group (IHIG)
7.00pm – 9.00pm I Rooms 116-117

Chair:
David T. Plante (United States)

SAVE THE DATE

Join us in Brisbane for our 6th IPSA congress!

THE INTERNATIONAL PEDIATRIC SLEEP ASSOCIATION PRESENTS

IPSA 2020 BRISBANE

October 21-24, 2020 | pedsleep.org

BRISBANE CONVENTION & EXHIBITION CENTRE | BRISBANE, AUSTRALIA

KEYNOTES

Michael Gradisar, PhD (Australia)
Flinders University
Technology and young people's sleep: One size does not fit all

Beth Malow, MD, MS (United States)
Vanderbilt University Medical Center
Developmental disabilities and sleep: Interrelationships, Impact, and new directions

Albert Martin LI, MD, MB ChB, FRCPCH (Hong Kong)
Chinese University of Hong Kong
Natural progression of obstructive sleep apnoea (OSA): Does baseline disease status predict adulthood cardiovascular outcomes?

PRESENTED BY

ipsa international pediatric sleep association

HOSTED BY

australasian sleep association

asta australasian sleep technologists association

NARCOLEPSY NETWORK

We are a nonprofit organization dedicated to increasing early diagnosis of narcolepsy, advocating for and supporting persons with narcolepsy and their families, and promoting critical research for treatment and a cure.

As a member, you'll receive our newsletter, educational materials, research support, discounted conference registration, and more!

Meet people with narcolepsy and their supporters and hear the latest developments in Albuquerque, New Mexico on October 25-27, 2019.

Our Youth Ambassador Program trains young members to use their voice to educate their communities about narcolepsy.

We advocate for all people with narcolepsy. We sent advocates to Washington, DC to be a voice for the narcolepsy community.

Around 400 narcolepsy patients and their loved ones, along with medical professionals, gather for our annual conference.

Learn more at www.narcolepsynetwork.org.

BECOME A DELEGATE

World Sleep Day

HOSTED BY WORLD SLEEP SOCIETY

MARCH 13, 2020

Celebrate the importance of sleep with delegates from around the globe at the Opening Ceremony & Networking Event.

SUNDAY, SEPTEMBER 22

Opening Ceremony to feature 2018 & 2019 Distinguished Activity Awards

MONDAY, SEPTEMBER 23

World Sleep Day Networking Event (1:00pm-2:00pm | Room 119)

Attendees did not need to host an event to join.

SAVE THE DATE TO HOST YOUR OWN EVENT ON MARCH 13, 2020

WORLD SLEEP SOCIETY

worldsleepday.org twitter.com/_WorldSleep facebook.com/wasmf

Dr. Christian Guilleminault "CG" (1938-2019) devoted his career to the development and advancement of Sleep Medicine & Research.

Famous for his involvement in the first classification and identification of sleep disorders, his groundbreaking research in the areas of sleep apnea, pediatric sleep disorders and narcolepsy made him a leader in the field.

Christian Guilleminault Memorial

THE CHRISTIAN GUILLEMINAULT YOUNG INVESTIGATOR ENDOWMENT FUND

In his memory, World Sleep Foundation, a nonprofit 501c(3) organization, has created an endowment in honor of this sleep pioneer.

PURPOSE

To encourage young investigators in the field of sleep, especially in developing portions of the world, to advance Sleep Medicine & Research worldwide.

GOAL

World Sleep Foundation's goal is to raise $100,000, allowing for $1,000 grants to be awarded per recipient each year.

Contribute to the endowment or apply to be on the Review Committee. Contributing to the Christian Guilleminault Young Investigator Endowment Fund is tax deductible. Gifts can be accepted online, at the Registration Desk or via wire transfer. For more information visit **worldsleep.info/YI.**

WORLD SLEEP FOUNDATION

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Dentists have the opportunity to avoid side effects.[1]

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PROSOMNUS [IA]
ITERATIVE ADVANCEMENT

PROSOMNUS [CA]
CONTINUOUS ADVANCEMENT

PROSOMNUS [PH]
PRECISION HERBST-STYLE

No statistical change in tooth position[1]

[1] Assessment of Potential Tooth Movement and Bite Changes With a Hard-Acrylic Sleep Appliance: A 2-Year Clinical Study. Journal of Dental Sleep Medicine Vol 6, No 2 2019

Side effects are a top 5 reason MD's do not prescribe OAT[2]

[2] Oral Appliance Therapy Awareness and Perceptions Survey by Sleep Ray Sleep Review, January 2019

2.5x to 5.0x less porosity for bio-gunk[3,4]

[3] Say No to Bio-Gunk!, by Dr. Michie Bull, DDS, Dental Sleep Magazine, Inaugural Issue, March 2019

World Sleep 2019
SEPTEMBER 20-25, 2019 | VANCOUVER, CANADA

ProSomnus Presents Patient Selection: The New Paradigm for Collaborative Treatment Success in Patients with OSA

Featuring: Dr. John E. Remmers, MD; Dr. Sharnell Muir, DMD, D-ABDSM; and Dr. Edward T. Sall, MD, DDS, MBA

Date: Monday, 9/23/2019 | **Time:** 1:00-1:45pm

Location: World Sleep 2019, Vancouver Convention Centre West Building, Room #223

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K09: Biomarkers and determinants of drowsy driving: Advances in reducing crash risk
8:00am – 8:45am I Ballroom A

8:00am - 8:02am
Introduction
Allan Pack (United States)

8:02am - 8:45am
Keynote Presentation
Clare Anderson (Australia)

K10: Perspectives of neuroimaging in sleep disorders
8:00am – 8:45am I Room 211

8:00am - 8:02am
Introduction
Thien Thanh Dang-Vu (Canada)

8:02am - 8:45am
Keynote Presentation
Seung Bong Hong (Republic of Korea)

S52: State-of-the-art of wearable technology and big data to advance sleep and circadian science
9:00am – 10:30am I Ballroom A

Chair:
Massimiliano de Zambotti (United States)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Intro to sleep in the digital health revolution
Sean Drummond (Australia)

9:18am – 9:34am
State-of-the art of wearable sleep technology
Massimiliano de Zambotti (United States)

9:34am – 9:50am
Sleep and circadian biomarkers: Toward new opportunities
Julie Carrier (Canada)

9:50am – 10:06am
Sleep faces big data: Potential and challenges
Shaun Purcell (United States)

10:06am – 10:22am
Future direction in wearable sleep technology: Short and long-term goals and needs
Sean Drummond (Australia)

10:22am – 10:30am
Conclusion

S53: Electronic media and sleep: Where are we and where are we headed?
9:00am – 10:30am I Room 109

Chairs:
Jan Van den Bulck (United States)

9:00am – 9:02am
Introduction

9:02am – 9:18am
The association between electronic media use and sleep in adolescents, an update
Lauren Hale (United States)

9:18am – 9:34am
Social media and sleep: The adolescent perspective informing research and education
Holly Scott (United Kingdom)

9:34am – 09:50am
The lesser of many evils: Could a harm minimisation approach to reduce electronic media use improve young people's sleep?
Michael Gradisar (Australia)

9:50am – 10:06am
Limited media exposure is associated with poor sleep patterns in ultra-orthodox female adolescents: The forbidden fruit effect?
Tamar Shochat (Israel)

10:06am – 10:22am
Electronic media use and sleep among adults: Is it all the same?
Liese Exelmans (United States)

10:22am – 10:30am
Conclusion

S54: Sleep disorders as a risk factor for suicide and the impact of treating insomnia in suicidal patients
9:00am – 10:30am I Rooms 121-122

Chairs:
William Vaughn McCall (United States)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Overview of sleep disorders and suicide
Christopher Drapeau (United States)

9:22am – 9:42am
Objective sleep markers of suicide risk: Polysomnography and actigraphy
Meredith Rumble (United States)

9:42am – 10:02am
REST-IT methods: The design of randomized clinical trials for suicidal outpatients
Andrew Krystal (United States)

10:02am – 10:22am
REST-IT results – sleep measures and suicidal ideation
William Vaughn McCall (United States)

10:22am – 10:30am
Conclusion

S55: What is slow-wave activity? And, can we manipulate it to our benefit?

9:00am – 10:30am I Room 211

Chair:
Jennifer Goldschmied (United States)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Experience and sleep-dependent synaptic plasticity
Guang Yang (United States)

9:18am – 9:34am
Bidirectional links between slow wave activity and β-amyloid pathology and their functional significance
Bryce Mander (United States)

9:34am – 9:50am
I want to sleep deeper! How does cognition affect slow-wave sleep?
Björn Rasch (Switzerland)

9:50am – 10:06am
Selective Slow-wave Disruption in Healthy and Depressed Samples
Jennifer Goldschmied (United States)

10:06am – 10:22am
Manipulating SWS with auditory stimulation: From basic knowledge to field studies
Eden Debellemaniere (France)

10:22am – 10:30am
Conclusion

S56: Obstructive sleep apnea, cognitive dysfunction & neurodegeneration: Current understanding

9:00am – 10:30am I Rooms 212-214

Chair:
Marta Kaminska (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:18am
Does OSA cause cognitive dysfunction and dementia? Epidemiology & mechanisms
Ivana Rosenzweig (United Kingdom)

9:18am – 9:34am
Cognitive defects associated with OSA: Comparison with other sleep disturbances, COPD and degenerative disorders
Melinda Jackson (Australia)

9:34am – 9:50am
Neuroimaging evidence of OSA effects on the brain
Nadia Gosselin (Canada)

9:50am – 10:06am
OSA and dementia: Biomarker evidence
Ricardo Osorio (United States)

10:06am – 10:22am
OSA in Parkinson's disease
Marta Kaminska (Canada)

10:22am – 10:30am
Conclusion

S57: Effects of perinatal sleep modulation in the mother and offspring: Evidences from preclinical research

9:00am – 10:30am I Rooms 215-216

Chairs:
Monica Levy Andersen (Brazil); Gabriel Natan Pires (Brazil)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep during pregnancy and postpartum and its relationship with maternal behavior
Gabriel Natan Pires (Brazil)

9:22am – 9:42am
Functional impact of sleep apnea during pregnancy in mother and offspring: Epigenetic modifications associated with metabolic disorders
Rene Cortese (United States)

9:42am – 10:02am
Preoptic sleep regulation during the postpartum period
Luciana Benedetto (Uruguay)

10:02am – 10:22am
Prenatal sleep deprivation and immature neuronal network in full term rat newborn
Kamalesh K. Gulia (India)

10:22am – 10:30am
Conclusion

S58: Sleep and memory over the lifespan
9:00am – 10:30am I Rooms 217-219

Chair:
Kerstin Hoedlmoser (Austria)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Functional impact of developmental changes in sleep microstructure on memory
Kerstin Hoedlmoser (Austria)

9:22am – 9:42am
Sleep benefits on memory encoding in adolescents and young adults
Michael Chee (Singapore)

9:42am – 10:02am
Boundaries for memory cueing and processing capabilities during sleep
Philippe Peigneux (Belgium)

10:02am – 10:22am
Do encoding deficits contribute to age-related changes in sleep-dependent memory consolidation?
Rebecca Spencer (United States)

10:22am – 10:30am
Conclusion

S59: Shift work in transportation systems
9:00am – 10:30am I Rooms 220-222

Chairs:
Andrea Rodenbeck (Germany); Daniel Aeschbach (Germany)

9:00am – 9:02am
Introduction

9:02am – 9:22am
Sleep in shift workers: Results from the updated, evidence-based German Guideline on Shift Work and Health
Céline Vetter (United States)

9:22am – 9:42am
Aircrew scheduling and sleepiness: A large EU study
Torbjörn Åkerstedt (Sweden)

9:42am – 10:02am
Interaction effects of workload and time awake on aircrew fatigue: Implications for duty time regulation
Daniel Aeschbach (Germany)

10:02am – 10:22am
The EU driving and rest period regulation and truck drivers' sleep and sleepiness
Mikael Sallinen (Finland)

10:22am – 10:30am
Conclusion

O22: Insomnia epidemiology and treatment
9:00am – 10:30am I Rooms 116-117

Chairs:
Leon Lack (Australia); Julio Fernandez-Mendoza (United States)

9:00am – 9:15am
HITTING THE NAIL ON THE HEAD: LONG-TERM EFFECTS OF GROUP CBT-I FOR SCHOOL-AGE CHILDREN SUFFERING FROM INSOMNIA SUBTYPES IN CHILDREN – WHO IMPROVES MOST?
Angelika Schlarb (Germany)

9:15am – 9:30am
CHANGES OF BEHAVIORAL AND EMOTIONAL PROBLEMS IN SCHOOL-AGE CHILDREN WITH CHRONIC INSOMNIA: LONG-TERM EFFECTS OF A RANDOMIZED CONTROLLED DESIGN
Angelika Schlarb (Germany)

9:30am – 9:45am
ARE RESIDUAL INSOMNIA SYMPTOMS PREDICTIVE OF NEW ONSET OF SIGNIFICANT DEPRESSIVE SYMPTOMS? – A POPULATION-BASED STUDY
Xiaowen ji (Canada)

9:45am – 10:00am
SUPPORTING PATIENT-CENTRED TREATMENT DECISION-MAKING – A PROTOTYPE OF A PATIENT EDUCATION TOOL
Janet M.Y. Cheung (Australia)

10:00am – 10:15am
CAN WE PREVENT INSOMNIA?A BRIEF COGNITIVE BEHAVIORAL THERAPY IN AT-RISK ADOLESCENTS
Ngan Yin Chan (Hong Kong)

10:15am – 10:30am
OBJECTIVE SHORT SLEEP DURATION PREDICTS THE EVOLUTION OF POOR SLEEP INTO INSOMNIA IN THE TRANSITION FROM CHILDHOOD TO YOUNG ADULTHOOD: THE PENN STATE CHILD COHORT
Julio Fernandez-Mendoza (United States)

O23: Bi-directional relationship between sleep breathing disorders and cardio-metabolic/renal disorders

9:00am – 10:30am I Room 110

Chairs:
Najib Ayas (Canada); Maree Barnes (Australia)

9:00am – 9:15am
INTERRELATIONSHIPS AMONG COMMON PREDICTORS OF CARDIOVASCULAR DISEASES IN PATIENTS OF OSA: A LARGE-SCALE OBSERVATIONAL STUDY
Yingjun Qian (China)

9:15am – 9:30am
INFLUENCE OF APOLIPOPROTEIN A-I AND B GENETIC VARIATIONS ON INSULIN RESISTANCE, METABOLIC SYNDROME IN OBSTRUCTIVE SLEEP APNEA
Shankai Yin (China)

9:30am – 9:45am
ASSOCIATION BETWEEN OBSTRUCTIVE SLEEP APNEA AND LIPID METABOLISM DURING REM AND NREM SLEEP
Huajun Xu (China)

9:45am – 10:00am
ASSESSING RISK OF FATALITY IN CHRONIC HEART FAILURE PATIENTS, USING NOCTURNAL PERIODICITY BIOMARKER OF CARDIOPULMONARY COUPLING
Hugi Hilmisson (United States)

10:00am – 10:15am
LONG TERM EFFECTS OF WEIGHT LOSS ON OBSTRUCTIVE SLEEP APNEA IN ADULTS WITH TYPE 2 DIABETES AND OVERWEIGHT/OBESITY: 10-YEAR RESULTS OF THE SLEEP AHEAD STUDY
Samuel T. Kuna (United States)

10:15am – 10:30am
IMPACT OF KIDNEY TRANSPLANTATION ON SLEEP APNEA SEVERITY: A PROSPECTIVE CONTROLLED POLYSOMNOGRAPHIC STUDY
Raphael Heinzer (Switzerland)

T11: CPAP compliance around the world (workshop)

9:00am – 10:30pm I Rooms 223-224

9:00pm – 10:30pm
CPAP compliance around the world
Laree Fordyce (United States); Angelica Benitez (Colombia); Alanna Cornish (United States)

D07: Capturing standardized outcome measures for registry based single N RCTs (nRCT=I)

9:00am – 10:30am I Rooms 118-120

Chairs:
Osman Ipsiroglu (Canada)

9:00am – 9:02am
Introduction

9:02am – 9:18am
The traditional use of actigraphy and modern actigraphy applications in smartphones
Mirja Quante (Germany)

9:18am – 9:34am
The variety of pulsoxymeters and their application in special patient populations
David Wensley (Canada)

9:34am – 9:50am
The use of home-based video-footage to identify contextual and personal factors affecting sleep and to differentiate discomfort and pain
Sue McCabe (Australia)

9:50am – 10:06am
How cell-phone based selfies can be used for vigilance detection
Gerhard Klöesch (Austria)

10:06am – 10:22am
The do's and don'ts of screening and home monitoring technologies for avoiding misinterpretations
Calvin Kuo (Canada); Mike Van der Loos (Canada)

10:22am – 10:30am
Conclusion

Exhibition
10:00am – 4:00pm I Exhibition

S60: New approaches in treating OSA in young subjects
10:45am – 12:15pm I Ballroom A

Chair:
Shannon Sullivan (United States)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Orofacial growth and OSA
Shannon Sullivan (United States)

11:03am – 11:19am
Short lingual frenulum, mouth breathing and maxillofacial development
Audrey Yoon (United States)

11:19am – 11:35am
Maxillary retrusion with treatment with bone-anchored-maxillary-expansion
Stacey Quo (United States)

11:35am – 11:51am
Maxillary expansion using endoscopic-assisted-surgical expansion
Kasey Li (United States)

11:51am – 12:07pm
Neutral-mandibular-advancement-device with tongue beads used only during the sleep as myofunctional treatment
Yu-Shu Huang (Taiwan)

12:07pm – 12:15pm
Conclusion

S61: Why the role of sleep in memory consolidation is overrated
10:45am – 12:15pm I Rooms 118-120

Chair:
Hans C. Dringenberg (Canada)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Consolidation mechanisms are active during wake and sleep
Hans C. Dringenberg (Canada)

11:07am – 11:27am
Memory consolidation is facilitated by waking rest
Erin J. Wamsley (United States)

11:27am – 11:47am
No cognitive processing in unconscious states: Sleep is no exception
Robert P. Vertes (United States)

11:47am – 12:07pm
A phylogenetic approach to understanding REM sleep function
Jerome Siegel (United States)

12:07pm – 12:15pm
Conclusion

S62: The role of sleep in aging: Molecular insights related to inflammation
10:45am – 12:15pm I Room 109

Chair:
Sergio Tufik (Brazil)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Effects of sleep on age-related conditions
Ronaldo Delmonte Piovezan (Brazil)

11:07am – 11:27am
Sleep disturbances and biological aging: The wear and tear of insufficient sleep
Judith Carroll (United States)

11:27am – 11:47am
Telomere length as a marker of sleep disturbances: A link between sleep and cellular senescence
Priscila Farias Tempaku (Brazil)

11:47am – 12:07pm
Mechanisms underlying the association between sleep-wake disruptions and Alzheimer's disease
Johathan Cedernaes (Sweden)

12:07pm – 12:15pm
Conclusion

S63: Biology and biomarkers of unexplained hypersomnolence

10:45am – 12:15pm I Rooms 121-122

Chairs:
David T. Plante (United States)

10:45am – 10:47am
Introduction

10:47am – 11:07am
GABA-related hypersomnolence
Lynn Marie Trotti (United States)

11:07am – 11:27am
Neuroimaging findings in sleep deprivation and hypersomnolence
Nathan Cross (Canada)

11:27am – 11:47am
Altered circadian period in idiopathic hypersomnia
Robert Thomas (United States)

11:47am – 12:07pm
Altered local slow wave activity in hypersomnolence disorder: A transdiagnostic process?
David T. Plante (United States)

12:07pm – 12:15pm
Conclusion

S64: The relationship between sleep and torpor: Circuits and mechanisms linking thermoregulation and sleep switch

10:45am – 12:15pm I Room 211

Chairs:
Giovanna Zoccoli (Italy); Vladyslav Vyazovskiy (United Kingdom)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Sleep and thermoregulatory control by the preoptic area
Clifford B. Saper (United States)

11:03am – 11:19am
Neural circuitry binding sleep and temperature regulation
William Wisden (United Kingdom)

11:19am – 11:35am
Orexins as a link between thermoregulation, sleep and torpor
Giovanna Zoccoli (Italy)

11:35am – 11:51am
The relationship between torpor and sleep: Focus on cortical network activity and sleep homeostasis
Vladyslav Vyazovskiy (United Kingdom)

11:51am – 12:07pm
Neurochemical mechanisms driving sleep and thermoregulation in the circannual rhythm of hibernation
Kelly Drew (United States)

12:07pm – 12:15pm
Conclusion

S65: Reconsidering NREM parasomnia: Toward a better understanding of pathophysiology and treatment

10:45am – 12:15pm I Rooms 212-214

Chair:
Geert Mayer (Germany)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Animal models for NREM parasomnia
Pierre-Hervé Luppi (France)

11:03am – 11:19am
Imaging findings and behavior in NREM parasomnia
Régis Lopez (France)

11:19am – 11:35am
Is there a genetic link to NREM parasomnia?
Anna Heidbreder (Germany)

11:35am – 11:51am
Neuronal networks from intracerebral recordings
Steve A. Gibbs (Canada)

11:51am – 12:07pm
New approaches in polysomnography analysis of NREM parasomnia
Geert Mayer (Germany)

12:07pm – 12:15pm
Conclusion

S66: Social aspects of sleep
10:45am – 12:15pm I Rooms 215-216

Chairs:
Tina Sundelin (Sweden)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Does sleep loss and sleepiness drive social behavior?
John Axelsson (Sweden)

11:07am – 11:27am
Effects of sleep loss on interpersonal communication and social impressions
Tina Sundelin (Sweden)

11:27am – 11:47am
Sleepless and alone: The neural correlates of social withdrawal without sleep
Eti Ben Simon (United States)

11:47am – 12:07pm
The impact of social rejection on subjective and objective measures of sleep
Aric Prather (United States)

12:07pm – 12:15pm
Conclusion

S67: Depression and sleep: New insights in measurement and treatment
10:45am – 12:15pm I Rooms 217-219

Chair:
Nicole Carmona (Canada)

10:45am – 10:47am
Introduction

10:47am – 11:03am
Predicting insomnia improvement in those with comorbid insomnia and depression
Colleen Carney (Canada)

11:03am – 11:19am
Multifaceted measurement of sleep and circadian factors in sleep and depression
Daniel Taylor (United States)

11:19am – 11:35am
Specificity of insomniatypic beliefs in predicting insomnia severity in those with depression
Nicole Carmona (Canada)

11:35am – 11:51am
Self-reported sleepiness versus pupillometricly measured sleepiness in depression
Kathryn Roecklein (United States)

11:51am – 12:07pm
Circadian preference as a moderator of depression outcome following cognitive behavioral therapy for insomnia plus antidepressant medications
Lauren Asarnow (United States)

12:07pm – 12:15pm
Conclusion

S68: On light, circadian rhythms and health
10:45am – 12:15pm I Rooms 220-222

Chair:
Myriam Juda (Canada)

10:45am – 10:47am
Introduction

10:47am – 11:07am
Epidemiology of human light-sampling behaviour
Till Roenneberg (Germany)

11:07am – 11:27am
Daylight saving time and light exposure
Kenneth Wright (United States)

11:27am – 11:47am
A novel data-driven approach to probe the link between light and health
Céline Vetter (United States)

11:47am – 12:07pm
Circadian rhythms, light, melatonin, and pregnancy
Elizabeth Klerman (United States)

12:07pm – 12:15pm
Conclusion

O24: Pediatrics
10:45am – 12:15pm I Rooms 116-117

Chairs:
Shelly Weiss (Canada); Tamar Shochat (Israel)

10:45am - 11:00am
SCHOOL START TIME CHANGE AND MOTOR VEHICLES CRASHES IN ADOLESCENT DRIVERS
Saadoun Bin-Hasan (Kuwait)

11:00am - 11:15am
UNFAVOURABLE SLEEP CHARACTERISTICS AND ADIPOSITY IN CHILDREN: DOES PARENTAL WEIGHT STATUS MAKE A DIFFERENCE?
Lijuan Xiu (Sweden)

11:15am - 11:30am
ASSOCIATIONS BETWEEN ELECTRONIC MEDIA USE AND SLEEP IN HONG KONG PRESCHOOL CHILDREN
Qiu-Ye Lan (China)

11:30am - 11:45am
EFFECTIVENESS OF PLAY2SLEEP WITH MOTHERS AND FATHERS OF INFANTS AGED 5 MONTHS: A MIXED METHODS STUDY EXAMINING THE EFFECT OF AN INTERVENTION DESIGNED TO IMPROVE PARENT-CHILD INTERACTION ON INFANT SLEEP
Elizabeth Keys (Canada)

11:45am - 12:00pm
EFFECTS OF SHORT DAYTIME NAP ON COGNITIVE PERFORMANCE AND DAYTIME BEHAVIOURS IN PRIMARY SCHOOL CHILDREN
Jiaxin Wei (Hong Kong)

12:00pm - 12:15pm
BEHAVIOURAL PROBLEMS, FUNCTIONAL ABILITY AND COGNITIVE FUNCTION IN CHILDREN WITH DOWN SYNDROME AND SLEEP PROBLEMS
Jasneek Chawla (Australia)

O25: Pregnancy and SBD
10:45am – 12:15pm I Room 110

Chair:
R John Kimoff (Canada); Helena Hachul (Brazil)

10:45am - 11:00am
SLEEP-DISORDERED BREATHING IN GESTATIONAL HYPERTENSION AND PREECLAMPSIA: IMPACT ON MATERNAL AND FETAL OUTCOMES
Danielle Wilson (Australia)

11:00am - 11:15am
PLACENTAL OXYGEN TRANSFER REDUCES HYPOXIA/REOXYGENATION SWINGS IN FETAL BLOOD IN A SHEEP MODEL OF GESTATIONAL SLEEP APNEA
Ramon Farre (Spain)

11:15am - 11:30am
PREVALENCE OF OBSTRUCTIVE SLEEP APNEA IN OBESE PREGNANT WOMEN AND ITS EFFECTS ON PREGNANCY-RELATED COMPLICATIONS
Hee Jung Kim (Republic of Korea)

11:30am - 11:45am
REAL-WORLD EVIDENCE OF IMPROVED PREGNANCY OUTCOMES WITH PAP THERAPY FOR GESTATIONAL SLEEP APNEA
Mihaela Bazalakova (United States)

11:45am - 12:00pm
SNORING DURING PREGNANCY AS A PREDICTOR OF FUTURE OBSTRUCTIVE SLEEP APNOEA: A CASE-CONTROL STUDY
Yu Sun Bin (Australia)

12:00pm - 12:15pm
MATERNAL SLEEP POSITION IN THE THIRD TRIMESTER OF PREGNANCY AND THE RISK OF STILLBIRTH
Robin Cronin (New Zealand)

T12: Medical ethics (workshop)
10:45am – 11:30am I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

10:45am – 11:30am
Medical ethics
Michael Eden (United States)

T13: Dealing with the difficult patient
11:30am – 12:30pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

11:30am – 12:30pm
Dealing with the difficult patient
Yuichi Inoue (Japan)

S69: Is Narcolepsy a spectrum disorder including IH, NT2 and NT1?
12:30pm – 2:00pm Ballroom A

Chairs:
Ulf Kallweit (Germany); Michael Thorpy (United States)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
Hypocretin neurons in health and disease
Mehdi Tafti (Switzerland)

12:52pm – 1:12pm
The neuronal and csf hypocretin associations with REM sleep phenomena and narcolepsy
Thomas Scammell (United States)

1:12pm – 1:32pm
Environmental factors for the development of narcolepsy and IH
Fang Han (China)

1:32pm – 1:52pm
Similarities in the clinical features of IH, NT2 and NT1
Yves Dauvilliers (France)

1:52pm – 2:00pm
Conclusion

S70: Sleep and mental health in adolescents
12:30pm – 2:00pm I Room 109

Chairs:
Fiona Baker (South Africa)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
Sleep and affective functioning in adolescents
Peter Franzen (United States)

12:52pm – 1:12pm
A longitudinal view on relationships between sleep, substance use, and mental health in adolescents
Aimee Goldstone (United States)

1:12pm – 1:32pm
The role of sleep in attention deficit hyperactivity disorder in adolescents
Anna Ivanenko (United States)

1:32pm – 1:52pm
Efficacy of sleep interventions in at-risk adolescents
Nicholas Allen (United States)

1:52pm – 2:00pm
Conclusion

S71: Neuroscience and neuroimaging insights into central disorders of hypersomnolence
12:30pm – 2:00pm I Rooms 121-122

Chair:
Rolf Fronczek (The Netherlands)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
Classifying and diagnosing central disorders of hypersomnolence
Rolf Fronczek (The Netherlands)

12:52pm – 1:12pm
Mechanisms of sleepiness and cataplexy in narcoleptic mice
John Peever (Canada)

1:12pm – 1:32pm
Structural and functional MRI findings in narcolepsy
Ysbrand Van Der Werf (The Netherlands)

1:32pm – 1:52pm
Functional and structural neuroimaging of idiopathic hypersomnia
Thien Thanh Dang-Vu (Canada)

1:52pm – 2:00pm
Conclusion

S72: Infra-slow oscillations – the keepers of sleep?
12:30pm – 2:00pm I Room 211

Chair:
Stephany Fulda (Switzerland)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
The 0.02 Hz oscillation times spontaneous transitions out of non-REM sleep
Anita Lüthi (Switzerland)

12:52pm – 1:12pm
Pupil size as a robust readout for cortical states changes in mice and humans
Daniel Huber (Switzerland)

1:12pm – 1:32pm
Deep description of infra-slow alterations in human non-REM sleep, dismantling age and mental health
Frederik D. Weber (The Netherlands)

1:32pm – 1:52pm
Infra-slow oscillations in healthy and disordered sleep
Stephany Fulda (Switzerland)

1:52pm – 2:00pm
Conclusion

S73: Upper airway stimulation therapy for obstructive sleep apnea: Theoretical considerations, clinical evidence, and implementation strategies

12:30pm – 2:00pm I Rooms 212-214

Chair:
Maurits Boon (United States)

12:30pm – 12:32pm
Introduction

12:32pm – 12:48pm
Neurophysiology of the upper airway and the mechanism of upper airway stimulation
Nico DeVries (The Netherlands)

12:48pm – 1:04pm
Efficacy and safety: A summary of clinical studies and experience
Maurits Boon (United States)

1:04pm – 1:20pm
Patient screening, selection, and surgical device implantation
Maurits Boon (United States)

1:20pm – 1:36pm
Post-operative management and long-term considerations
Clemens Heiser (Germany)

1:36pm – 1:52pm
Practical aspects of initiating an upper airway stimulation program
Olivier Vanderveken (Belgium)

1:52pm – 2:00pm
Conclusion

S74: Sleep, mental health, and performance in elite athletes

12:30pm – 2:00pm I Rooms 215-216

Chairs:
Michael Grandner (United States); Charles Samuels (Canada)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
Mental health in elite athletes and the role of sleep: An update on the International Olympic Committee consensus statement on mental health
Michael Grandner (United States)

12:52pm – 1:12pm
Assessment of sleep in elite athletes: Standardized approaches for when everyone is an outlier
Charles Samuels (Canada)

1:12pm – 1:32pm
Treating sleep problems and disorders in elite athletes: Adaptive solutions to varied clinical challenges
Jonathan Charest (Canada)

1:32pm – 1:52pm
Travel and sport: Current approaches to optimizing performance in the context of travel
Ian Dunican (Australia)

1:52pm – 2:00pm
Conclusion

S75: Role of sleep and sleep therapies in the pathogenesis and outcomes of neurologic disorders

12:30pm – 2:00pm I Rooms 217-219

Chair:
Nancy Foldvary-Schaefer (United States)

12:30pm – 12:32pm
Introduction

12:32pm – 12:48pm
Role of Sleep in the neurobiology of Alzheimer's disease and mild cognitive impairment
Madeleine Grigg-Damberger (United States)

12:48pm – 1:04pm
Stroke and sleep: Pathogenic mechanisms and treatment effects
Brian Murray (Canada)

1:04pm – 1:20pm
Traumatic brain injury: What's sleep got to do with it?
Christian Baumann (Switzerland)

1:20pm – 1:36pm
Practical implications of sleep and sleep therapies on epilepsy
Nancy Foldvary-Schaefer (United States)

1:36pm – 1:44pm
Conclusion

S76: The future of assessing fitness to drive in sleep disorders
12:30pm – 2:00pm I Rooms 220-222

Chair:
Mark Howard (Australia)

12:30pm – 12:32pm
Introduction

12:32pm – 12:52pm
The impact of sleep restriction and sleep disorders in road safety
Markku Partinen (Finland)

12:52pm – 1:12pm
What are the best biomarkers to determine fitness to drive in sleep apnea?
Pierre Philip (France)

1:12pm – 1:32pm
Novel methods to assess alertness failure and driving risk in sleep apnea
Andrew Vakulin (Australia)

1:32pm – 1:52pm
Occular biomarkers for prediction and monitoring alertness in sleep apnea and shift work
Mark Howard (Australia)

1:52pm – 2:00pm
Conclusion

D08: Telemedicine in sleep medicine
12:30pm – 2:00pm I Rooms 118-120

Chair:
Babak Amra (Islamic Republic of Iran)

12:30pm – 12:32pm
Introduction

12:32pm – 12:48pm
Telemedicine: What can be achieved through engineering
Thomas Penzel (Germany)

12:48pm – 1:04pm
Telemedicine guideline in sleep medicine
Christoph Schoebel (Germany)

1:04pm – 1:20pm
Global prevalence of OSA estimation – importance for telemedicine applications
Atul Malhotra (United States)

1:20pm – 1:36pm
Diagnostic telemedicine applications
Ingo Fietze (Germany)

1:36pm – 1:52pm
The smartphone tool: Consumer and diagnostic apps
Babak Amra (Islamic Republic of Iran)

1:52pm – 2:00pm
Conclusion

K11: Sleep apnea endotypes and phenotypes: Use of new technology in obstructive sleep apnea
2:00pm – 2:45pm I Ballroom A

2:00pm - 2:02pm
Introduction
Najib Ayas (Canada)

2:02pm - 2:45pm
Keynote Presentation
Atul Malhotra (United States)

K12: From somnolence in the general population to narcolepsy
2:00pm – 2:45pm I Room 211

2:00pm - 2:02pm
Introduction
Jaques Montplaisir (Canada)

2:02pm - 2:45pm
Keynote Presentation
Yves Dauvilliers (France)

T14: Differential diagnosis
2:00pm – 3:30pm I Room 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

2:00pm - 3:30pm
Differential diagnosis
Thomas Penzel (Germany)

S77: Brain iron as a central factor in the pathophysiology of RLS: Emerging evaluation methods and therapeutic opportunities

3:00pm – 4:30pm I Ballroom A

Chair:
Diego García-Borreguero (Spain)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Brain iron deficiency relation to dopamine dysfuntion and augmentation in RLS
Christopher Earley (United States)

3:22pm – 3:42pm
Brain iron dysregulation in RLS relation to brain adenosine and glutamate
Sergi Ferre (Spain)

3:42pm – 4:02pm
MRI evaluation of regional brain iron relation to RLS symptoms and iron treatments
Richard Allen (United States)

4:02pm – 4:22pm
Transcraneal sonography evaluation of substantia nigra iron: A potential clinical tool to predict IV iron treatment outcome
Celia Garcia Malo (Spain)

4:22pm – 4:30pm
Conclusion

S78: The impact of short and disturbed sleep on pain: New mechanistic insights, sex differences, and clinical implications

3:00pm – 4:30pm I Room 109

Chairs:
Monika Haack (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Do women and men respond differently to short or disrupted sleep? Inflammation, pain, and fatigue
Monika Haack (United States)

3:22pm – 3:42pm
Preoperative sleep disruption worsens surgical pain in the rat: Role of preoptic adenosine signaling in sleep-pain interactions
Giancarlo Vanini (United States)

3:42pm – 4:02pm
Effects of acute and chronic sleep disturbance on pain sensitivity and analgesic treatments in mice
Chloe Alexandre (United States)

4:02pm – 4:22pm
The effects of sleep disruption and loss on endogenous analgesia and opioidergic pain control
Michael Smith (United States)

4:22pm – 4:30pm
Conclusion

S79: Protective and risk factors of treating insomnia in youth

3:00pm – 4:30pm I Rooms 121-122

Chair:
Jihui Zhang (Hong Kong)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Identifying protective and risk factors to improve the sleep health of the young
Kate Bartel (Australia)

3:22pm – 3:42pm
Non-pharmacological management of parasomnia in children
Seockhoon Chung (Republic of Korea)

3:42pm – 4:02pm
Cognitive-behavioural therapy for comorbid insomnia and depression in adolescents
Shirley Xin Li (Hong Kong)

4:02pm – 4:22pm
Mobile phone use and sleep and mood disturbances in adolescents and young adults
Jihui Zhang (Hong Kong)

4:22pm – 4:30pm
Conclusion

S80: Functional networks of the sleepy and sleeping brain

3:00pm – 4:30pm I Room 211

Chairs:
Jean-Marc Lina (Canada); Julie Carrier (Canada)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
An overview in functional connectivity in recent sleep studies
Jean-Marc Lina (Canada)

3:18pm – 3:34pm
From action potentials to neural oscillations: How brain regions exchange information across wakefulness and sleep
Umberto Olcese (The Netherlands)

3:34pm – 3:50pm
The neural correlates of sleep inertia
Raphael Vallat (United States)

3:50pm – 4:06pm
Abnormal brain connectivity and cognitive performance in OSA
Luigi Ferini-Strambi (Italy)

4:06pm – 4:22pm
NREM sleep functional connectivity: A window on the aging brain
Julie Carrier (Canada)

4:22pm – 4:30pm
Conclusion

S81: Sleep health disparities among children across three continents

3:00pm – 4:30pm I Rooms 212-214

Chairs:
Monica Roosa Ordway (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Individual determinants of sleep in children living with socioeconomic adversity
Monica Roosa Ordway (United States)

3:18pm – 3:34pm
The impact of parental adverse childhood experiences on children's sleep in China
Guanghai Wang (China)

3:34pm – 3:50pm
Sleep insecurity within Australian communities and co-design of community interventions to support children's sleep health
Karen Thorpe (Australia)

3:50pm – 4:06pm
Social impact on children's health: The role of childcare
Sally Staton (Australia)

4:06pm – 4:22pm
Cross cultural (Asian, Australian, American) differences of SEM model of sleep: Putting it all together
Simon Smith (Australia)

4:22pm – 4:30pm
Conclusion

S82: Targeting sleep to improve mental health

3:00pm – 4:30pm I Rooms 215-216

Chair:
Christoph Nissen (Switzerland)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
The effect of treating sleep in depression on emotion perception: Results from a randomized controlled trial of cognitive behavioural therapy for insomnia
Matthew J Reid (United Kingdom)

3:22pm – 3:42pm
Text messages to maintain sleep, circadian, and health improvement 12-months following treatment for adolescents with an eveningness chronotype: A randomized controlled trial
Michael Dolsen (United States)

3:42pm – 4:02pm
Sleep and memory in medicated vs. unmedicated patients with major depression
Leonore Bovy (The Netherlands)

4:02pm – 4:22pm
Closed-loop modulation of sleep slow waves to treat major depression
Christoph Nissen (Switzerland)

4:22pm – 4:30pm
Conclusion

S83: Cluster analysis, biomarkers, and physiologic phenotyping: Towards a precision medicine approach to OSA?

3:00pm – 4:30pm I Rooms 217-219

Chairs:
Tetyana Kendzerska (Canada); Glen Foster (Canada)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Cluster analysis of symptoms and polysomnographic data: A useful predictive tool?
Klar Yaggi (United States)

3:22pm – 3:42pm
Can biomarkers be used to predict adverse outcomes in patients with OSA?
Najib Ayas (Canada)

3:42pm – 4:02pm
Deep phenotyping using PSG: Limitations and future promises
Scott Sands (United States)

4:02pm – 4:22pm
Towards a precision based medicine approach to OSA
Robert L. Owens (United States)

4:22pm – 4:30pm
Conclusion

S84: Sleep & fatigue in healthcare professionals

3:00pm – 4:30pm I Rooms 220-222

Chairs:
Antje Büttner-Teleagă (Republic of Korea); Kneginja Richter (Germany)

3:00pm – 3:02pm
Introduction

3:02pm – 3:22pm
Delimitation fatigue, sleepiness and tiredness
Peter Geisler (Germany)

3:22pm – 3:42pm
Even night owls need sleep! Why night owls and morning larks need different work schedules: Different technologies and devices of Sleep and Fatigue measurements
Gerhard Klöesch (Austria)

3:42pm – 4:02pm
Fatigue and fatigue-related accidents in healthcare professionals
Maritta Orth (Germany)

4:02pm – 4:22pm
Sleep, well-being and ill-health in healthcare

4:22pm – 4:30pm
Conclusion

O26: Technology

3:00pm – 4:30pm I Rooms 116-117

Chair:
Sharon Keenan (United States); Christoph Schoebel (Germany)

3:00pm – 3:15pm
AUTOMATED SLEEP STAGE CLASSIFICATION USING AN ADAPTIVE PATIENT-DEPENDENT ALGORITHM BASED ON PHYSICIAN-MIMICKING PROCESS
Jade Vanbuis (France)

3:15pm – 3:30pm
BENEFITS AND RISKS OF SLEEP-TRACKERS: EVALUATION OF 7 DEVICES
Philippe Cabon (France)

3:30pm – 3:45pm
AUTOMATIC ESTIMATION OF HEART RATE FROM HEART SOUNDS DURING SLEEP
Muammar Kabir (Canada)

3:45pm – 4:00pm
DEEP LEARNING ENABLES ACCURATE SLEEP STAGING BASED ON A SINGLE FRONTAL EEG CHANNEL
Henri Korkalainen (Finland)

4:00pm – 4:15pm
THE HYPNODENSITY GRAPH: A NEW REPRESENTATION OF SLEEP SCORING BASED ON MULTIPLE MANUAL EXPERT SCORINGS AND ESTIMATED BY ARTIFICIAL INTELLIGENCE
Peter Anderer (Austria)

4:15pm – 4:30pm
VALIDATION OF AN EYE MOVEMENT DETECTOR AND INTER-RATER VARIABILITY OF THE MANUAL SCORING OF DIFFERENT TYPES OF NOCTURNAL EYE MOVEMENTS
Julie Christensen (Denmark)

O27: Young or new investigator awards
3:00pm – 4:30pm I Room 110

Chairs:
Carlos Schenck (United States); Célyne H. Bastien (Canada)

3:00pm – 3:15pm
SLEEP DURATION AND BREAST CANCER INCIDENCE: RESULTS FROM THE MILLION WOMEN STUDY AND A META-ANALYSIS OF PUBLISHED STUDIES
Angel Tsz Yan Wong (United Kingdom)

3:15pm – 3:30pm
BRAIN ACTIVATION TIME-LOCKED TO SLEEP SPINDLES ASSOCIATED WITH HUMAN COGNITIVE ABILITIES
Zhuo Fang (Canada)

3:30pm – 3:45pm
HACKING THE HUMAN CIRCADIAN SYSTEM WITH MICROFLASHES OF LIGHT
Daniel Joyce (United States)

3:45pm – 4:00pm
SLEEP FRAGMENTATION, ACCELERATED AGING AND INCREASED ACTIVATION OF MICROGLIA, AND COGNITIVE IMPAIRMENT IN OLDER ADULTS
Kirusanthy Kaneshwaran (Canada)

4:00pm – 4:15pm
ADVERSE EVENTS OF PLACEBO FOR PARTICIPANTS IN PHARMACOLOGICAL RCTS FOR INSOMNIA – A SYSTEMATIC REVIEW AND META-ANALYSIS
Christoph Patrick Werner (Australia)

4:15pm – 4:30pm
TRANSCRIPTIONAL BASIS FOR RHYTHMIC CONTROL OF HUNGER AND METABOLISM WITHIN THE AGRP NEURON
Jonathan Cedernaes (Sweden)

D09: Innovative therapies for obstructive sleep apnea care delivery world wide
3:00pm – 4:30pm I Rooms 118-120

Chair:
Harneet K. Walia (United States)

3:00pm – 3:02pm
Introduction

3:02pm – 3:18pm
Introduction to the quality measures and sleep apnea management group clinic for OSA
Harneet K. Walia (United States)

3:18pm – 3:34pm
Volume to value based model and population health initiatives for OSA in US
Nancy Foldvary-Schaefer (United States)

3:34pm – 3:50pm
Current OSA health care delivery in United Arab Emirates (UAE) and Asia
Preeti Devnani (United Arab Emirates)

3:50pm – 4:06pm
Current diagnostic and therapeutic strategies in Canada for OSA
Brian Murray (Canada)

4:06pm – 4:22pm
Novel strategies for sleep health service delivery in Australia
Ching-Li Chai-Coetzer (Australia)

4:22pm – 4:30pm
Conclusion

T15: Modalities of treatment (workshop)
3:45pm – 5:00pm I Rooms 223-224

Chairs:
Michael Eden (United States); Shalanda Mitchell (United States)

3:45pm – 5:00pm
Modalities of treatment
Sharon Keenan (United States)

S85: Genetics of sleep and its disorders: An update
4:30pm – 6:00pm I Ballroom A

Chair:
Allan Pack (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
Recent advances in elucidating common genetic variants associated with sleep and sleep disorders
Richa Saxena (United States)

4:52pm – 5:12pm
Going from GWAS to identifying causative genes
Philip R. Gehrman (United States)

5:12pm – 5:32pm
Identifying extreme phenotypes: Using obstructive sleep apnea as an example
Ulysses J. Magalang (United States)

5:32pm – 5:52pm
Utilizing large biobanks for studies of the genetics of sleep disorders
Allan Pack (United States)

5:52pm – 6:00pm
Conclusion

S86: Global perspectives on adolescent sleep and health: Predictors, treatments and policies

4:30pm – 6:00pm I Room 109

Chair:
Lisa J. Meltzer (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:48pm
Pre-pubertal sleep patterns forecast adolescent sleep preferences and mental health functioning
Candice A. Alfano (United States)

4:48pm – 5:04pm
Sleep problems from early adolescence to emerging adulthood: Developmental patterns and predictors
Mari Hysing (Norway)

5:04pm – 5:20pm
Modifying the impact of eveningness chronotype ('night-owls') in youth: A randomized controlled trial
Allison G. Harvey (United States)

5:20pm – 5:36pm
Bright light therapy and physical activity for adolescents with delayed sleep-wake phase disorder: Effects on sleep and depression symptoms
Cele Richardson (Australia)

5:36pm – 5:52pm
Impact of delaying high school start times on adolescent sleep and health
Lisa J. Meltzer (United States)

5:52pm – 6:00pm
Conclusion

S87: REM Sleep Behavior Disorder and REM sleep without atonia across the lifespan

4:30pm – 6:00pm I Rooms 121-122

Chairs:
Erik K. St. Louis (United States); Suresh Kotagal (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
RSWA and RBD: Preclinical evidence for roles in normal motor development and disease
Pierre-Herve Luppi (France)

4:52pm – 5:12pm
RSWA and RBD in children and adolescents
Suresh Kotagal (United States)

5:12pm – 5:32pm
REM sleep behavior disorder in younger and older adults
Erik K. St. Louis (United States)

5:32pm – 5:52pm
Isolated RSWA: Normal variant or prodromal synucleinopathy?
Birgit Högl (Austria)

5:52pm – 6:00pm
Conclusion

S88: Neuroscience of dreaming

4:30pm – 6:00pm I Room 211

Chair:
Leonore Bovy (The Netherlands)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
The EEG correlates of dreaming
Francesca Siclari (Switzerland)

4:52pm – 5:12pm
The cerebral correlates of high dream recall frequency
Perrine Ruby (France)

5:12pm – 5:32pm
The cognitive neuroscience of lucid dreaming
Benjamin Baird (United States)

5:32pm – 5:52pm
Emotion and metacognition during sleep
Leonore Bovy (The Netherlands)

5:52pm – 6:00pm
Conclusion

S89: Is obstructive sleep apnea a primary care disease?

4:30pm – 6:00pm I Rooms 212-214

Chair:
Sachin R. Pendharkar (Canada)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
Diagnosis and treatment of OSA by primary care providers: The Australian experience
Ching-Li Chai-Coetzer (Australia)

4:52pm – 5:12pm
Effectiveness of different models of primary care management of OSA: Lessons from Spanish randomized controlled trials
Fernando Masa (Spain)

5:12pm – 5:32pm
Challenges to the effective implementation of primary care management of OSA
Vishesh K. Kapur (United States)

5:32pm – 5:52pm
Community-based management of sleep disordered breathing in Alberta, Canada: Stakeholder perspectives and an integrated model of care
Sachin R. Pendharkar (Canada)

5:52pm – 6:00pm
Conclusion

O28: Narcolepsy

4:30pm – 6:00pm I Rooms 116-117

Chairs:
Brian Murray (Canada); Fang Han (China)

4:30pm – 4:45pm
THE PHARMACOKINETICS OF ONCE-NIGHTLY CONTROLLED- RELEASE SODIUM OXYBATE (FT218): OVERVIEW OF RESULTS FROM FOUR PHASE 1 STUDIES
Michael Thorpy (United States)

4:45pm – 5:00pm
EVALUATION OF ABUSE POTENTIAL OF THE NARCOLEPSY MEDICATION PITOLISANT
Jeffrey Dayno (United States)

5:00pm – 5:15pm
EFFICACY AND SAFETY OF JZP-258 IN A PHASE 3 DOUBLE-BLIND, PLACEBO-CONTROLLED, RANDOMISED-WITHDRAWAL STUDY IN ADULTS WITH NARCOLEPSY WITH CATAPLEXY
Richard Bogan (United States)

5:15pm – 5:30pm
A PHASE 1 SINGLE ASCENDING DOSE STUDY OF A NOVEL OREXIN 2 RECEPTOR AGONIST, TAK-925, IN HEALTHY VOLUNTEERS (HV) AND SUBJECTS WITH NARCOLEPSY TYPE 1 (NT1) TO ASSESS SAFETY, TOLERABILITY, PHARMACOKINETICS, AND PHARMACODYNAMIC OUTCOMES
Rebecca Evans (United States)

5:30pm – 5:45pm
DEFINING DISRUPTED NIGHTTIME SLEEP (DNS) IN PEDIATRIC NARCOLEPSY
Kiran Maski (United States)

5:45pm – 6:00pm
MODIFIED MAINTENANCE OF WAKEFULNESS TEST (MWT) SHOWS ENHANCED VISUAL CORTICAL ACTIVATION IN PATIENTS WITH NARCOLEPSY TYPE 1: AN FMRI-EEG STUDY
Jari Gool (The Netherlands)

O29: Neurological sleep disorders

4:30pm – 6:00pm I Rooms 215-216

Chairs:
Luigi Ferini-Strambi (Italy); Marco Zucconi (Italy)

4:30pm – 4:45pm
TASIMELTEON DEMONSTRATES EFFICACY IN IMPROVING SLEEP DISTURBANCES OF INDIVIDUALS WITH SMITH-MAGENIS SYNDROME (SMS)
Changfu Xiao (United States)

4:45pm – 5:00pm
SLEEP SPINDLES AND K-COMPLEX ACTIVITIES ARE DECREASED IN SPINOCEREBELLAR ATAXIA TYPE 2: RELATIONSHIP TO MEMORY AND MOTOR PERFORMANCES
Roberto Rodríguez-Labrada (Cuba)

5:00pm – 5:15pm
BREATHEMND-1 STUDY: A PROSPECTIVE STUDY TO SYSTEMATICALLY ASSESS THE NATURE AND TIME COURSE OF SLEEP DISORDERED BREATHING AND RESPIRATORY FAILURE IN PATIENTS WITH MOTOR NEURONE DISEASE
Vinod Aiyappan (Australia)

5:15pm – 5:30pm
DEMENTIA RISK IS HIGHER WITH ACTIGRAPHY DERIVED POOR SLEEP BUT NOT 24-HOUR ACTIVITY RHYTHM DISTURBANCE
Annemarie I Luik (The Netherlands)

5:30pm – 5:45pm
BEHAVIORAL AND REGIONAL EEG FEATURES OF PARASOMNIA EPISODES IN DISORDERS OF AROUSAL
Jacinthe Cataldi (Switzerland)

5:45pm – 6:00pm
SLEEP AND FATIGUE IN THE FIRST YEAR AFTER TRAUMATIC BRAIN INJURY IN THE ELDERLY
Simon Beaulieu-Bonneau (Canada)

O30: Pharmacological interventions

4:30pm – 6:00pm I Rooms 217-219

Chairs:
Russell Rosenberg (United States); Gary Zammit (United States)

4:30pm – 4:45pm
SENESCENCE-ACCELERATED MOUSE PRONE-8 SAMP8 MICE AS A PRECLINICAL MODEL FOR IRREGULAR SLEEP WAKE RHYTHM DISORDER AND EFFICACY OF THE DUAL OREXIN (HYPOCRETIN) RECEPTOR ANTAGONIST LEMBOREXANT
Carsten T. Beuckmann (Japan)

4:45pm – 5:00pm
THE EFFECT OF MORPHINE ON SLEEP: IS THERE A GENETIC EFFECT? – AN RCT STUDY
David Wang (Australia)

5:00pm – 5:15pm
TASIMELTEON DEMONSTRATES EFFICACY TO TREAT JET LAG DISORDER IN AN 8 HOUR PHASE ADVANCE CLINICAL STUDY
Christos Polymeropoulos (United States)

5:15pm – 5:30pm
HIGH DOSE ZOPICLONE DOES NOT CHANGE OSA SEVERITY, THE RESPIRATORY AROUSAL THRESHOLD, GENIOGLOSSUS MUSCLE RESPONSIVENESS OR NEXT-DAY SLEEPINESS AND ALERTNESS IN SELECTED PEOPLE WITH OSA
Sophie Carter (Australia)

5:30pm – 5:45pm
LONG-TERM EFFECTS OF SOLRIAMFETOL ON QUALITY OF LIFE IN PARTICIPANTS WITH EXCESSIVE DAYTIME SLEEPINESS ASSOCIATED WITH NARCOLEPSY OR OBSTRUCTIVE SLEEP APNOEA
Atul Malhotra (United States)

5:45pm – 6:00pm
CLINICALLY RELEVANT EFFECTS OF SOLRIAMFETOL ON EXCESSIVE DAYTIME SLEEPINESS: A POST-HOC ANALYSIS OF THE MAGNITUDE OF CHANGE IN CLINICAL TRIALS IN ADULTS WITH NARCOLEPSY OR OBSTRUCTIVE SLEEP APNOEA
Russell Rosenberg (United States)

O31: Circadian disorders

4:30pm – 6:00pm I Rooms 220-222

Chairs:
Diane Boivin (Canada); Jeanne Duffy (United States)

4:30pm – 4:45pm
DNA METHYLATION IN BLOOD LEUKOCYTES AS PUTATIVE BIOMARKERS FOR INSUFFICIENT SLEEP
Alexandra Lahtinen (Finland)

4:45pm – 5:00pm
CLOCK AND BMAL1 GENES EXPRESSION IN THE HYPOTHALAMUS OF SLEEP-DEPRIVED PREGNANT WISTAR RATS AND THEIR OFFSPRING
David Ehichioya (Nigeria)

5:00pm – 5:15pm
LARGE WHOLE GENOME SEQUENCING STUDY IDENTIFIES NOVEL VARIANTS ASSOCIATED WITH INTRINSIC CIRCADIAN PERIOD IN HUMANS
Sanda Smieszek (United States)

5:15pm – 5:30pm
ALTERATION OF NAD+-SIRT1 PATHWAY AS BIOMARKERS OF CIRCADIAN DISRUPTION IN SHIFT WORKERS
Mingzhu Fang (United States)

5:30pm – 5:45pm
CHRONOTYPE, MTNR1B GENE POLYMORPHISM RS10830963, AND THE RISK OF TYPE 2 DIABETES: A CROSS-SECTIONAL STUDY IN UK BIOBANK
Xiao Tan (Sweden)

5:45pm – 6:00pm
PHASE RELATIONSHIPS BETWEEN DIM LIGHT MELATONIN ONSET AND SLEEP MARKERS DETERMINED FROM ACTIGRAPHY, SLEEP DIARIES AND THE MUNICH CHRONOTYPE QUESTIONNAIRE
Andrew Reiter (Australia)

O32: Sleep breathing disorders: Clinical
4:30pm – 6:00pm I Room 110

Chairs:
Matt Naughton (Australia); Douglas Bradley (Canada)

4:30pm – 4:45pm
DIFFERENTIAL ASSOCIATIONS OF SLOW WAVE SLEEP AND AMYLOID BURDEN WITH COGNITIVE IMPAIRMENT IN OBSTRUCTIVE SLEEP APNOEA: A PET IMAGING STUDY
Melinda Jackson (Australia)

4:45pm – 5:00pm
SLEEPINESS ASSESSED VIA CONTINUOUS OCULAR ALERTNESS MEASURES IN OBSTRUCTIVE SLEEP APNOEA PATIENTS DURING REGULAR ON ROAD DRIVING
Jennifer Cori (Australia)

5:00pm – 5:15pm
THE COGNITIVE DYSFUNCTION IN EARLY PARKINSON'S DISEASE WITH OBSTRUCTIVE SLEEP APNEA HYPOPNEA SYNDROME
Yun Shen (China)

5:15pm – 5:30pm
STRUCTURAL RISK FACTORS FOR OBSTRUCTIVE SLEEP APNEA AT DIFFERENT LEVELS OF OBESITY
Liyue Xu (China)

5:30pm – 5:45pm
DELINEATING THE ROLE OF OSA ON MILD COGNITIVE IMPAIRMENT PROFILES AND MEMORY RECALL PERFORMANCE IN OLDER ADULTS AT-RISK OF DEMENTIA
Aaron Lam (Australia)

5:45pm – 6:00pm
THRESHOLDS FOR CLINICALLY MEANINGFUL CHANGES ON THE EPWORTH SLEEPINESS SCALE AND MAINTENANCE OF WAKEFULNESS TEST SLEEP LATENCY
Gert Jan Lammers (The Netherlands)

D10: Sleep medicine in Latin America: Past, present and future
4:30pm – 6:00pm I Rooms 118-120

Chairs:
Lourdes DelRosso (United States)

4:30pm – 4:32pm
Introduction

4:32pm – 4:52pm
The road from neuroscience to sleep medicine
Marisa Pedemonte (Uruguay)

4:52pm – 5:12pm
Sleep societies and training programs in Latin America
Darwin Vizcarra (Peru)

5:12pm – 5:32pm
Current research and innovation in Latin America
Pablo Brockmann (Chile)

5:32pm – 5:52pm
The future of sleep medicine in Latin America
Monica Levy Anderson (Brazil)

5:52pm – 6:00pm
Conclusion

Closing Ceremony
6:00pm – 7:00pm I Ballroom A

Charles Morin (Canada)
Out-going President

Birgit Högl (Austria)
Incoming President

Announcing World Sleep 2021
Andrea Bacelar
Brazilian Sleep Society

Save the date for World Sleep 2021 in Rio de Janeiro, Brazil and present the best in Sleep Medicine & Research.

SEPTEMBER 1, 2020
Symposia submission begins

DECEMBER 1, 2020
Abstract submission begins

DECEMBER 1, 2020
Symposia submission ends

JANUARY 31, 2021
Early acceptance abstract deadline

MAY 31, 2021
Oral and Young or New Investigator abstract deadline

JULY 15, 2021
Poster abstract deadline

Industry-Supported Symposia & Workshops

World Sleep 2019 will include the following scientific symposia and workshops within the program. Boxed lunches are provided to satellite sympoisa attendees with first-come, first-served, 10 minutes prior to the session starting. Please contact the exhibitors directly or visit our online scientific program for additional information. Thank you to our industry supporters.

Monday, September 23, 2019

Satellite Symposia I 12:30pm - 2:00pm

12:20pm Box Lunches Served

Jazz Pharmaceuticals **Ballroom A**
Waking up to narcolepsy: Strategies to improving outcomes

Eisai **Rooms 121-122**
Insomnia: It's a night and day issue

Philips **Rooms 217-219**
Positional sleep apnea and its treatment

Arbor Pharmaceuticals **Rooms 220-222**
Restless legs syndrome: Progress and pitfalls

Industry Workshop I 1:00pm - 1:45pm

Nox Medical **Rooms 215-216**
Beyond the AHI: Nox Medical Industry Workshop

ProSomnus **Rooms 223-224**
Patient selection: The new paradigm for collaborative treatment success in patients with OSA

Tuesday, September 24, 2019

Satellite Symposia I 12:30pm - 2:00pm

12:20pm Box Lunches Served

Jazz Pharmaceuticals **Ballroom A**
Excessive daytime sleepiness in patients with OSA: Impact, causes and treatment strategies

Harmony Biosciences **Rooms 118-120**

Philips **Rooms 217-219**
Clinical update in servo-ventilation

Merck **Rooms 220-222**
Insomnia in Alzheimer's disease: Sleep matters

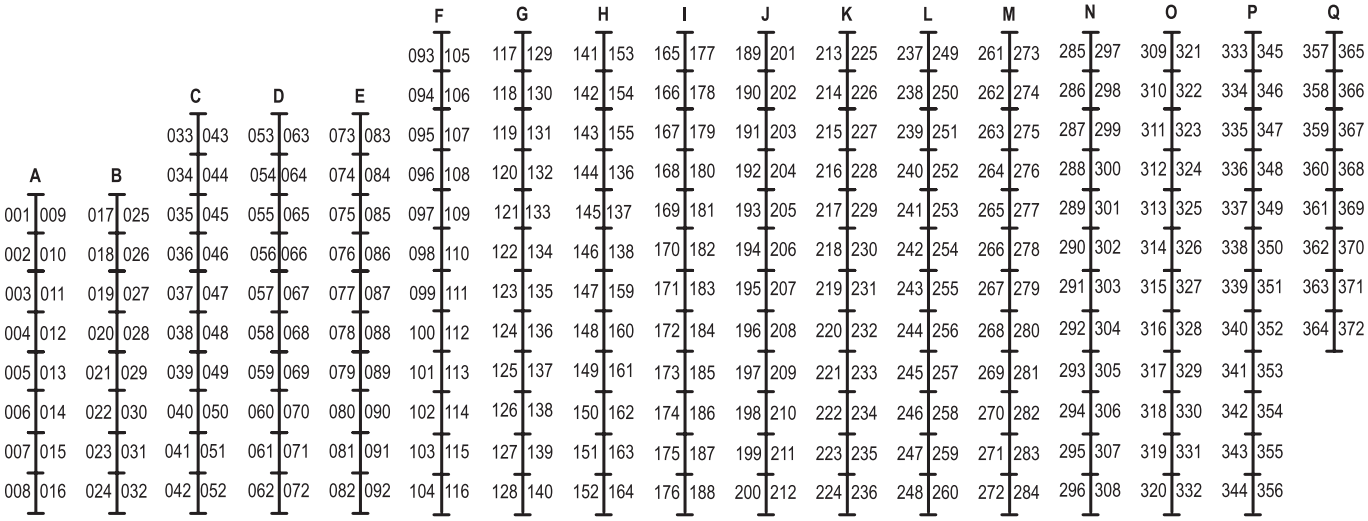
Industry Workshop I 1:00pm - 1:45pm

DREEM **Room 110**
Insomnia Workshop

View full summaries, learning objectives and more on worldsleepcongress.com.

WEST LEVEL 1 I BALLROOM B I POSTERS

Below is the Poster Abstract Floor Plan within the Exhibit Hall (Ballrooms B, C, D) of the Vancouver Convention Centre.



Sunday, September 22, 2019
Poster 1 (P1) 4:30pm-6:00pm

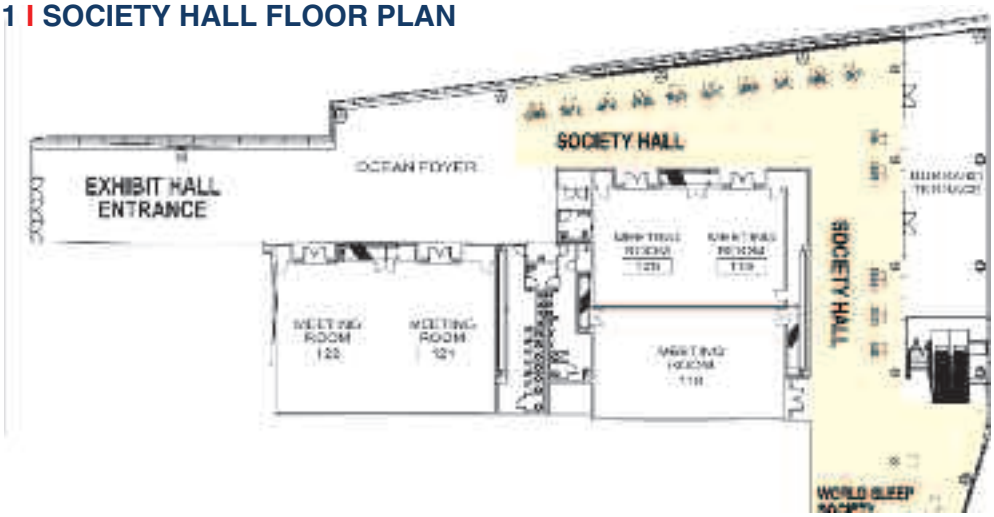
Monday, September 23, 2019
Poster 2 (P2) 5:30pm-7:00pm

Tuesday, September 24, 2019
Poster 3 (P3) 5:30pm-7:00pm

Poster Board Numbers

Row A: 001-016
Row B: 017-032
Row C: 033-052
Row D: 053-072
Row E: 073-092
Row F: 093-116
Row G: 117-140
Row H: 141-164
Row I: 165-188
Row J: 189-212
Row K: 213-236
Row L: 237-260
Row M: 261-284
Row N: 285-308
Row O: 309-332
Row P: 333-356
Row Q: 357-372

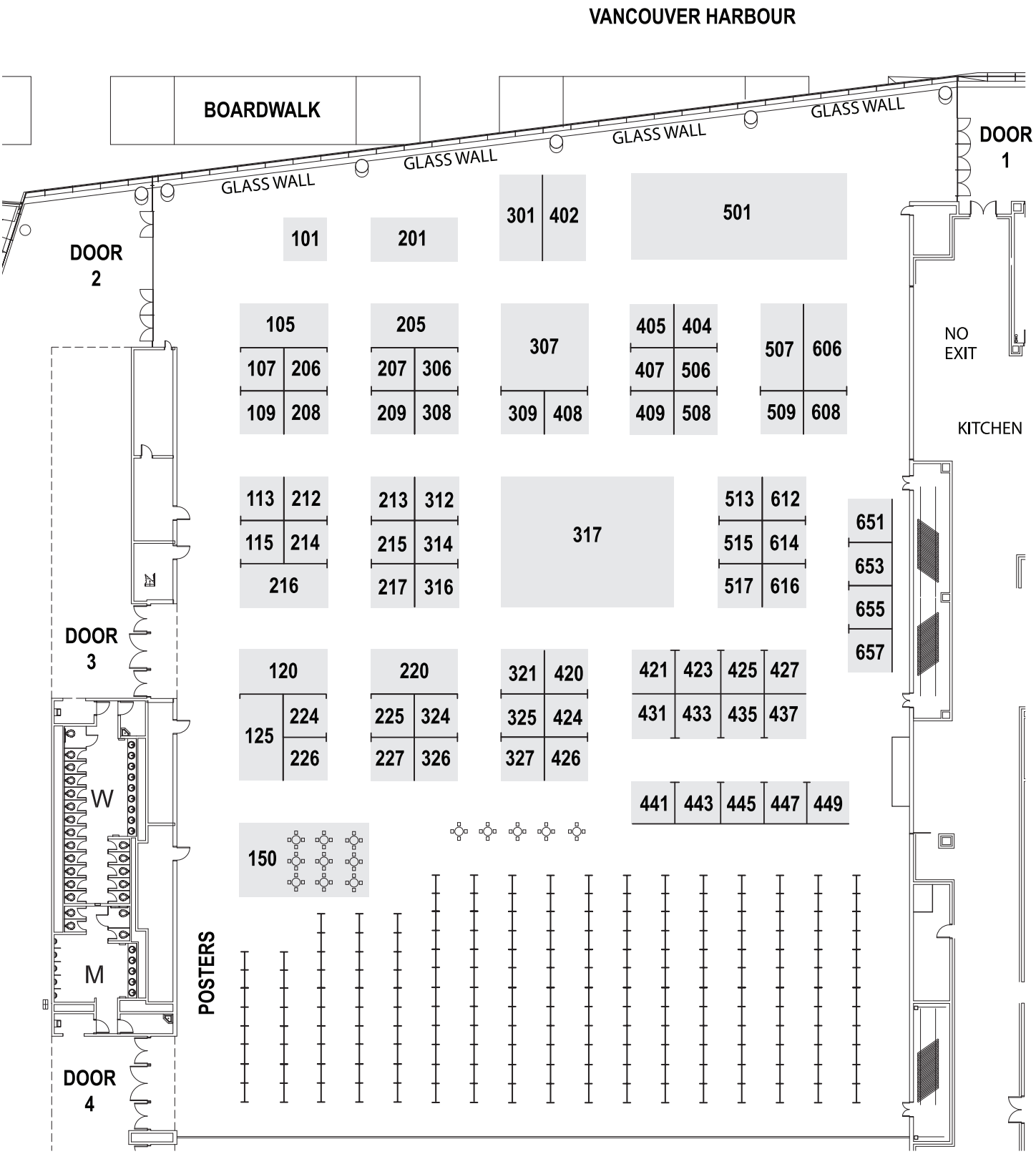
WEST LEVEL 1 I SOCIETY HALL FLOOR PLAN



SH1 World Sleep Foundation
SH2 European Sleep and Research Society (ESRS)
SH3 International RLS Study Group (IRLSSG)
SH4 International Pediatric Sleep Association (IPSA)
SH5 Canadian Sleep and Circadian Network (CSCN)
SH6 Canadian Sleep Society
SH7 The Australasian Sleep Association (ASA)
SH8 Brazilian Sleep Society
SH10 American Academy of Sleep Medicine (AASM)
SH12 South East Asian Academy of Sleep Medicine (SEAASM)
SH14 Integrated Sleep Medicine Society Japan (ISMSJ)
SH15 Asian Society of Sleep Medicine (ASSM)
SH16 Association of Southeast Asian Nations (ASEAN)

SPONSORS/EXHIBITORS

WEST LEVEL 1 I DETAILED EXHIBIT HALL FLOOR PLAN



World Sleep 2019 Sponsors/Exhibitors

657 **aastweb.org**

American Association of Sleep Technologists (AAST), established in 1978, is a community of more than 4,000 sleep professionals whose skills, expertise, knowledge and experience help support and improve the quality of sleep and wakefulness in all people. For sleep technologists and managers who seek timely and applicable sleep-related knowledge, AAST provides education, resources and collaboration with like-minded individuals to keep them abreast of the evolving sleep field. AAST members include sleep technologists, sleep managers and other healthcare professionals involved with sleep or the sleep field.

SH10 **aasm.org**

American Academy of Sleep Medicine (AASM), established in 1975, improves sleep health and promotes high quality, patient-centered care through advocacy, education, strategic research, and practice standards. The AASM has a combined membership of 10,000 accredited member sleep centers and individual members, including physicians, scientists and other health care professionals.

655 **aamsinfo.org**

Academy of Applied Myofunctional Sciences (AAMS) is a non-profit (501c3 USA based) scientific society engaged in advancing research, scientific standards, education, and public health related to myofunctional therapy (MFT) around the world. The AAMS has helped start 11 regional non-profit scientific societies in the area of MFT around the world (Brazil, Japan, Scandinavia et al) and currently is helping in the formation of 14 new societies (Hong Kong/Taiwan/China, Australia, United Kingdom, et al).

655 **aomtinfo.org**

Academy of Orofacial Myofunctional Therapy (AOMT) is the leading post-graduate institution for allied health professional training in the area of orofacial myofunctional therapy. Additionally the AOMT helps facilitate research, curriculum development, and public health initiatives and has relationships with more than 40 universities and hospital groups around the world.

653 **accreditation.ca**

Accreditation Canada is an independent, not-for-profit organization that accredits health care and social services organizations in Canada and around the world. Its comprehensive accreditation programs foster ongoing quality improvement through evidence-based standards and a rigorous external peer review.

216 **airnutri.com**

Air Nutri Solution Inc. is a high tech company, specializing in the R&D and commercialization of air ion wave technology for health care applications. The company has successfully developed the first Slow-Wave (Delta-wave) Sleep Machine in the world, Nutrisleep6. The innovative product will provide a noninvasive solution for those who plagued by various sleeping disorders.

326 **airavant.com**
AirAvant Medical is pleased to release the new Bongo Rx sleep apnea therapy device that does NOT require a hose, mask or CPAP unit. Bongo is an FDA cleared EPAP device for the treatment of Mild to Moderate Sleep Apnea.

LET NOTHING STOP YOU™

427 **alpha-stim.com**
Alpha-Stim® is a handheld, prescription medical device that is FDA cleared to treat acute, post-traumatic, and chronic pain, along with anxiety, insomnia, and depression. Proven fast, safe and effective by more than 100 clinical trials over 37 years. Try it free at booth 427 or view studies at alpha-stim.com.

Bronze Sponsor
405 **arborpharma.com**
Arbor Pharmaceuticals, headquartered in Atlanta, Georgia, is a specialty pharmaceutical company currently focused on the cardiovascular, neuroscience, hospital, and pediatric markets. Arbor currently markets over twenty NDA or ANDA approved products and also has several additional products in late-stage development. For more information regarding Arbor Pharmaceuticals or any of its products, visit www.arborpharma.com or send email inquiries to info@arborpharma.com.

SH16 **asfcongress.caodangytelamdong.edu.vn**
Association of Southeast Asian Nations (ASEAN) Sleep Federation is a regional society currently composed of associate sleep societies from Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. It was established in 2011 to promote the development of the field of Sleep Medicine and sleep health awareness among ASEAN countries.

SH15 **asiansleep.org**
The mission of Asian Society of Sleep Medicine (ASSM) is to promote all aspects in sleep medicine and research in Asia. These aspects shall include but not limited to advancing the knowledge, promoting education and training, developing translational research of sleep, sleep health, and sleep disorders. By establishing international exchanges and knowledge transfer among physicians, psychologists, nurses, technologists, basic scientists, and other medical professionals in the sleep field, the field of sleep medicine can advance for all Asian populations.

513 **aurumgroup.com**
The Aurum Group has always been committed to supporting dentistry with not only the most technologically advanced restorative materials and techniques available but also in terms of research, education and program assistance. Through our worldwide network and never-ending search for the best in proven new technologies and methodologies, we bring the latest innovations and experience from around the world to bear on your individual case situations, every day.

SH7 **sleep.org.au**
The Australasian Sleep Association (ASA) is the peak scientific body in Australia and New Zealand representing clinicians, researchers and scientists in the broad area of Sleep. The ASA is focussed on promoting education and training in sleep health and sleep medicine, fostering research and establishing clinical standards, as demonstrated by their Annual Scientific Meeting, Sleep DownUnder.

113 **avadel.com**
Avadel is currently enrolling patients with narcolepsy in our REST-ON Phase 3 trial evaluating once-nightly sodium oxybate. Visit Booth 113 to find out more about the REST-ON trial, patient eligibility, and our patient referral program. Avadel is committed to providing solutions for overlooked and unmet medical needs through patient-focused, innovative products.

437 **beluntech.com**
Belun® Ring, a ring-type cableless pulse oximeter, measures oximetry, pulse rate and motion for assessing the risk of sleep apnea and sleep quality. With the proprietary cloud-based artificial intelligence (AI) system, total sleep time, respiratory event index, autonomous nervous system response and oxygen desaturation index are derived.'

433 **brpt.org**
The Board of Registered Polysomnographic Technologists (BRPT) is recognized around the world for the highest standards in sleep credentialing, certification and education.

420 **braebon.com**
BRAEBON Medical Corporation proudly introduces enhancements to the MediByte wearable recorder technology for monitoring and diagnosing snoring and sleep apnea. BRAEBON's DentiTrac is the first objective oral appliance compliance micro-recorder cleared by the US FDA. BRAEBON also introduces web cloud portal enhancements for 2019. For more information: info@braebon.com, 1-888-462-4841 x218

431 **brainvision.com**
Brain Vision LLC offers cutting-edge research solutions for neurophysiological research. We integrate EEG and PSG with fMRI, fNIRS, TMS, tES, in the context of sleep. Our solutions include wired and wireless systems with passive, active, or dry electrodes. Come visit our booth to discuss your ideal solution with us!

SH8 **absono.com.br**
Brazilian Sleep Society is a multidisciplinary institution whose missions are the promotion of sleep qualification for health professionals, dissemination of scientific knowledge, and increase the sleep awareness of the general population. In addition, the society is committed with the development of new public policies in the Brazilian health system. Brazilian Sleep Society is also responsible for Sleep Science — a peer-reviewed international, interdisciplinary and open access journal.

408 **cadwell.com**
Cadwell Industries, Inc. has designed and manufactured neurodiagnostic and neuromonitoring systems since 1979. Customer input, employee expertise and American-made components are built into our EEG, EMG/EP, IONM, Sleep, Data Management, and Neuro Consumables. Cadwell values innovation, product quality, intuitive usability, and outstanding customer support. Cadwell: Helping you help others.

308 **camntech.com**
CamNtech Ltd are wearable technology pioneers with nearly 25 years of providing solutions for research and clinical applications. The MotionWatch is one of the smallest, lightest Actigraphy devices currently available with long recording times and no re-charging. Our CE marked, FDA cleared medical devices are manufactured in our ISO13485 facility

Canadian Sleep Society | Société Canadienne du Sommeil

SH6 **css-scs.ca**

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

CSCN Canadian Sleep & Circadian Network

SH5 **www.cscnweb.ca**

Canadian Sleep and Circadian Network (CSCN) has brought together researchers with an interest in sleep and circadian disruptions and its impact on the health of Canadians (60 researchers in 19 universities) since 2015. Its mission is to mobilize the healthcare community to adopt an integrated approach towards improving outcomes and treatment of patients with sleep and circadian disorders.

cerebrahealth™

201 **cerebrahealth.com**

Cerebra Health is a digital health company focused on the development and delivery of technology to help people understand and improve their sleep. Cerebra's science and medical devices position the company as a leader in the field of digital sleep analysis, and makes state of the art assessment available to consumers in their own home.

Clinical Sleep SOLUTIONS

441 **clinicalsleep.com**

Clinical Sleep Solutions. Discover the innovative technologies that has propelled Clinical Sleep Solutions to become one of the leading service providers in our industry. We have designed and developed unique tools to aid in the treatment of obstructive sleep apnea, enhancing existing technologies to further improve adherence and compliance.

CoastalSleep SLEEP APNEA CLINICS

115 **coastalsleep.ca**

Coastal Sleep is a locally owned clinic specializing in the treatment of Obstructive Sleep Apnea that is passionate about getting people the sleep they need to function well, rejuvenate their body and live happier. Coastal Sleep specializes in home testing and sleep apnea treatment and offers free testing and free CPAP trials to ensure treatment is optimized and beneficial.

COMPUMEDICS® 'Defining Life's Signals'

608 **neuromedicalsupplies.com**

Compumedics Neuroscan offers comprehensive and innovative solutions. The latest ProFusion Sleep software, ProFusion Sleep 4, continues to be the choice platform for recording, analysis and reporting sleep studies. Compumedics new ProFusion NeXus 360 providing workflow efficiencies from the Cloud via a full web-based interface accessed from your PC or wireless device.

CONDOR INSTRUMENTS

312 **condorinst.com.br/en**

Condor Instruments offers high quality wrist actimeters (actigraphs) for medical and research applications, specially tailored for sleep and circadian disorders monitoring.

Day4NAPs

515 **day4naps.org**

Day4Naps (Day For Narcolepsy Awareness Projects) is a non-profit organization serving as a clearinghouse for narcolepsy related projects/activities/events. We provide a global non-partisan platform for sharing the diverse projects which promote information about this chronic neurological condition. Our primary event occurs on the Saturday prior to the Spring Vernal Equinox.

402 **dreem.com/en**

Dreem is a science and technology pioneer. Its solution, Dreem 2, represents an entirely unique type of product, one where sleep and behavioral science meet neurotechnology in order to help people to better identify and address their sleep problems by combining sleep monitoring with expert day-to-day guidance.

227 **dymedix.com**

Dymedix Diagnostics manufactures and markets a complete line of adult, pediatric, and neonatal, reusable and disposable sensors. Exclusively using PVDF technology our accreditation compliant sensors are more comfortable, more flexible, more accurate, more convenient, more economical and more disposable than traditional sensors. Visit the booth that is ALWAYS INNOVATING.

499 **ebbsleep.com**

Ebb Therapeutics was founded in 2008 by Eric Nofzinger, M.D., after performing pioneering brain imaging studies on insomnia patients at the University of Pittsburgh. His research resulted in the development of Ebb Insomnia Therapy, a clinically safe, medical-grade device, available by prescription, and Ebb® with Precision Cool Technology, the direct-to-consumer offering.

Gold Sponsor

220 **eisai.com**

Eisai Co., Ltd. is a leading global research and development-based pharmaceutical company headquartered in Japan. We define our corporate mission as “giving first thought to patients and their families and to increasing the benefits health care provides,” which we call our human health care (hhc) philosophy.

614 **elsevier.com**

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, and deliver better care. Visit our booth to find out about our Sleep Medicine journals, how to publish (open access), and how to enrich your journal article with exciting innovation.

SH2 **esrs.eu**

European Sleep and Research Society (ESRS) is an international scientific non-profit organization and promotes all aspects of sleep research and sleep medicine. These include the publication of the Journal of Sleep Research (JSR), the organization of scientific meetings, and the promotion of training and education, the dissemination of information, and the establishment of fellowships and awards.

435 **enerkeykingdom.com**

Farm Lands Biotech (FLB) is established in 2005 and has been an agent and distributor of multinational medical companies for many years. In 2016, FLB launched a sleep-assisted device named 「EnerKey Kingdom」, cooperates with a team of professional electrical engineers, aim to provide a safe, non-drug and non-invasive solution for those suffering from sleep disorders. For more information: enerkey@farmsbiotech.com.

125 **fatiguescience.com**

Fatigue Science forecasts the impact of sleep on performance. Based on the US Army’s SAFTE™ algorithm, not only is sleep quality measured, but dangerous fatigue levels and peak mental effectiveness are predicted. This technology has won several innovation awards, and is relied upon by heavy industry, military, and pro athletes globally.

409 **fphcare.com/us**

Fisher & Paykel Healthcare is a leading designer and manufacturer of products and systems for use in respiratory care, acute care and the treatment of obstructive sleep apnea. Our purpose is to improve care and outcomes through inspired and world-leading healthcare solutions. Visit our booth to experience our award winning CPAP masks and SleepStyle device.

213 **happiestbaby.com**

Happiest Baby's SNOO is the world's first smart bassinet and the safest baby bed ever made. By imitating the womb, SNOO adds 1-3 hours to a baby's sleep, prevents dangerous rolling (a leading trigger of SUID), and calms fussing (usually in under 1 minute).

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317 **harmonybiosciences.com**

Harmony Biosciences, LLC is a private biopharmaceutical company with a vision to develop and commercialize novel treatment options for people living with rare diseases. With a focus on the central nervous system, including disorders of sleep and wakefulness, Harmony Biosciences is currently working to advance the science and understanding of narcolepsy.

309 **thehealthystart.com**

HealthyStart by Ortho-Tain. Ortho-Tain manufactures and distributes preformed, functional orthodontic appliances for early and adult treatment, invented by an orthodontist. The Nite-Guide (5-7 year-old); the Occlus-o-Guide (8-12 year old); and the Adult Ortho-T (adult dentition). All are functional, orthopedic and treatment/finishing appliances to eliminate overbite, overjet, crowding, and most TMJ problems. Also, snoring and habit appliances for children and adults as well as class III.

424 **hypersomniafoundation.org**

The Hypersomnia Foundation is a patient focused advocacy group dedicated to improving the lives of people with idiopathic hypersomnia and related disorders by providing support, advocating on their behalf, raising awareness among the public and healthcare professionals, and enabling research into effective treatments, better diagnostic tools, and, ultimately, a cure.

226 **inspiresleep.com**

Inspire Medical Systems, Inc. is the leading developer of implantable neurostimulation systems to treat moderate-to-severe Obstructive Sleep Apnea. Utilizing well-established technologies from cardiac pacing and neurostimulation, Inspire developed a proprietary Upper Airway Stimulation (UAS) therapy designed to improve sleep and enrich the lives of people suffering from this challenging condition.

SH14 **ismsj.org**

Integrated Sleep Medicine Society Japan (ISMSJ) has three essential missions to 1) provide the members with opportunities of leaning the latest findings of sleep research and practice at an international standard, 2) promote good communication between sleep researchers and practitioners and 3) contribute to both research and practice in sleep medicine through increasing its awareness and literacy among professionals working in non-sleep fields and the general public.

SH 4 **pedsleep.org**

International Pediatric Sleep Association (IPSA) operates exclusively for scientific and educational purposes, and to promote basic and applied research in all areas of sleep in infants, children and adolescents. Ensuring a good sleep during development is of key importance for a later healthy life. IPSA 2020 will take place in Brisbane, Australia from October 20-24, 2020.

SH3 **irlssg.org**

International RLS Study Group (IRLSSG) is a nonprofit organization of professionals committed to advancing basic and clinical research of restless legs syndrome (RLS). IRLSSG works together to provide scientific and medical information to professionals and the public.

606 **iopimedical.com**

IOPI Medical manufactures products that objectively measure tongue and lip strength and can be used for biofeedback for oral motor exercises. Objective measurements from the IOPI allows the therapist or physician to justify the need for therapy, set exercise parameters using the principles of exercise science, document the results, and evaluate program effectiveness.

Gold Sponsor

501 **jazzpharma.com**

Jazz Pharmaceuticals plc is a global biopharmaceutical company dedicated to developing life-changing medicines for people with limited or no options, so they can live their lives more fully. As a leader in sleep medicine and with a growing hematology/oncology portfolio, Jazz is focused on transforming biopharmaceutical discoveries into novel medicines.

507 **kegocorp.com**

KEGO Corporation specializes in the distribution and manufacture of medical equipment and supplies, with a focus on Respiratory, Sleep and Neuro Diagnostics. KEGO is excited to introduce its CPAPology product line, a brand focused on Improving Your Sleep Experience. Stop by booth #507 to see our growing line of CPAP accessories.

207 **ketteringseminars.com**

Kettering National Seminars is the leader in allied health credentialing exam preparation. Our motto is: “Pass your RPSGT exam or your money back. Guaranteed!” Live Seminars, Webinars, and individual Home Study programs are offered to techs who want to earn their sleep credentials.

316 **macplc.com**

MAC Research Limited. MAC Clinical Research is the UK’s largest independent clinical development organisation owning a network of eight Dedicated Research Sites including an MHRA Accredited Phase 1 unit, GMP unit and CD license holders. These services are supplemented with state-of-the-art sleep laboratories supported by highly experienced sleep Physiologists and Neurophysiologists who have successfully completed complex sleep orientated projects.

306 **mainlandsleep.ca**

Mainland Sleep Diagnostics, Ltd. Having opened in 1998, Mainland Sleep Diagnostics has been treating sleep apnea for over 20 years in 9 clinic locations throughout the Lower Mainland. We strive to help each patient successfully treat their sleep apnea by providing extensive education, best CPAP equipment, ongoing support, and continually educating ourselves on the latest treatment options.

517 **medigas.com**

Medigas is celebrating half a century of providing physicians, healthcare professionals and their patients with sleep therapy, respiratory care and medical equipment solutions. Medigas has maintained a distinct focus on providing patients a tradition of quality service and can be depended on to be responsive, reliable and respectful.

208 **medsleep.com**

MedSleep's network of clinics are committed to providing the highest quality sleep medicine services across Canada. We provide clinical consultation, diagnostic services (sleep testing) and treatment for the full spectrum of sleep disorders. Our commitment to quality and a patient centric philosophy has always been our guiding principle.

Silver Sponsor

150 **merck.com**

Merck. For more than a century, Merck has been inventing for life, bringing forward medicines and vaccines for many of the world's most challenging diseases. Today, Merck continues to be at the forefront of research to deliver innovative health solutions and advance the prevention and treatment of diseases that threaten people and animals around the world.

443 **nukute.com**

Nukute Oy Ltd. has developed a patient-friendly and cost-efficient home test solution for diagnosing sleep apnea through a combination of wireless sensors, tablet for delivering user guidance and analysis in the cloud to provide Apnea Hypopnea Index (AHI) report through online user interface for the doctor.

325 **narcolepsynetwork.org**

Narcolepsy Network is a patient support organization and dedicated to improving the lives of people with narcolepsy. The organization's goals include increasing public awareness, advocating for all people with narcolepsy, educating people with narcolepsy and the public at large and supporting research. Programs include annual conference and youth ambassador program.

324 **narcolepsy.org.uk**

Narcolepsy UK provides relief and aid to those persons suffering from narcolepsy. With a history stretching back to 1981, Narcolepsy UK is a charity registered in England & Wales and Scotland with a vision to help narcolepsy be understood so people with narcolepsy have the same opportunities as others in society.

205 **natus.com**

Solutions that span the spectrum of neuro care. Natus Neuro is global market leader that provides diagnostic and therapeutic solutions in neurodiagnostics, neurocritical care, neurosurgery and sleep. Natus Neuro delivers clinician-led solutions that improve outcomes and enhance care for patients through leading-edge equipment, service, education and supplies.

651 **neilmed.com**

NeilMed® Pharmaceuticals, Inc. has a mission to create and maintain safe, affordable and effective products to sustain long-term growth and create drug free and effective Sinus, Ear, First Aid, and Baby care devices for millions of consumers worldwide. Please visit www.neilmed.com for more details.

nox medical

Bronze Sponsor

307 **noxmedical.com**

Nox Medical builds medical devices for sleep diagnostics. Our mission is to advance sleep diagnostics through simplification, increased efficiency and comfort in all patient groups. Nox Medical's products include a full range of sleep diagnostic solutions, such as the Nox T3, Nox A1 PSG System, and the Noxturnal Software.

OVENTUS™

423 **o2vent.com**

Oventus Medical is an Australian medical device company specializing in innovative oral devices to treat obstructive sleep apnea (OSA). O2Vent® oral devices offer an alternative to traditional treatments. Designed to address the entire upper airway, the O2Vent® allows for breathing through a patented airway, bypassing obstructions from the nose, soft palate and tongue.

PANTHERA SLEEP

101 **pantherasleep.com**

Recognized as a world pioneer and leader in CAD/CAM dentistry, Panthera Dental created its sleep division based on that innovative technology to provide its customers with the highest levels of product quality and precision. The Panthera Sleep division designs, develops, manufactures and markets high-end Mandibular Advancement Devices and related products using superior quality materials.

Pascoe
Natural Healthcare since 1895

509 **pascoe.ca**

For over 120 years, Pascoe has been dedicated to creating, researching and developing top of the line natural healthcare products, including Pascoflair, a herbal sleep-aid made from 425mg of passionflower. As a third-generation family-owned manufacturer and distributor, Pascoe products are distributed in over 30 countries worldwide.

Perfect Sleep Pad™

407 **perfectsleeppad.com**

Heating and cooling mattress pads single or dual zone and Head pads that are working all night to hold your core body temperature constant. Temperature as low as 46°F / 8°C and a sleep temperature as warm as 118°F / 48°C) without EMF consistent sleep temperature is achieved.

phasya

217 **phasya.com/en**

Phasya offers products for measuring objectively drowsiness metrics (level of drowsiness, PERCLOS, etc.) and eye metrics (eyelids gap, pupil diameter, pupil diameter) based on the analysis of eye images at 120 Hz. We offer an easy-to-use device–the Drowsimeter R100–dedicated to research purposes.

PHILIPS

Gold Sponsor

120 **respironics.com**

Philips is a leading health technology company focused on improving people's health and enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions in Sleep and Respiratory Care.

426 **physip.fr/en**

Physip developed ASEEGA®, an expert algorithm combining signal processing, artificial intelligence – and 20 years of experience in sleep EEG to provide automatic sleep staging, advanced spectral analysis, spindle analysis and more, for healthy subjects and patients, for full PSG and reduced montage. Discover how ASEEGA® can help your research!

206 **project-sleep.com**

Project Sleep is a 501(c)(3) non-profit organization dedicated to raising awareness about sleep health and sleep disorders. The organization's programming includes the Rising Voices of Narcolepsy leadership training program, the Jack & Julie Narcolepsy Scholarship, the Narcolepsy: Not Alone® campaign, the Sleep In, and advocacy efforts.

224

ProMedica is Canada's trusted source for respiratory supplies, home medical equipment and accessories. Hospitals, clinics, care facilities and home care companies choose us for quality products, competitive pricing and free shipping coast to coast. Employers rely on ProMedica to ensure their workplace health and safety programs are compliant. From first aid and safety station supplies to emergency medical equipment to safety training and certification, put the ProMedica advantage to work for you.

209 **prosomnus.com**

ProSomnus® Sleep Technologies designs, manufactures and markets FDA Cleared Class II Medical Devices dentists use to treat patients diagnosed with Obstructive Sleep Apnea. ProSomnus Devices are the first, precision Oral Appliance Therapy devices designed to enhance compliance, mitigate side effects and, enable dentists to achieve excellent patient experiences and outcomes.

301 **resmed.com/us/en**

ResMed pioneers innovative solutions that treat and keep people out of the hospital, empowering them to live healthier, higher-quality lives. Our cloud-connected medical devices transform care for people with sleep apnea, COPD and other chronic diseases

321 **salimetrics.com**

Salimetrics provides innovative saliva-based bioscience research tools and services to investigators studying sleep, health, drug-discovery, and behavior. Founded in 1998, Salimetrics supports global CROs, pharmaceuticals, academic researchers and the immunodiagnostic industry with accurate results using the leading immunoassays, participant-centric and validated saliva collection methods, laboratory testing services, and DNA analysis.

506 **sleepmultimedia.com**

SleepMultiMedia v 11.0 is a computerized textbook of sleep medicine with text, sound, graphics, animation, and video; suitable for all sleep specialists, trainees and researchers. Updated annually with 140 CME credits, the program covers clinical and dental sleep medicine, sleep physiology, polysomnography, sleep research and sleep practice management. Available on a USB.

212 **somnics.com**

Somnics was founded in 2011 by Dr. Chung-Chu Chen. The company is a medical device start-up focusing on developing innovative technologies for the treatment of Obstructive Sleep Apnea (OSA) based on a new technological concept compared to the established companies in the field of Sleep Apnea.

109 **somnomed.com**

SomnoMed is the global leader in COATTM (Continuous Open Airway Therapy), and has innovated OSA treatment options since 2004. Our world class devices are designed with patient comfort as priority, and we are proud to have the best support and service system for our dentists and your patients. Learn more at www.somnomed.com.

612 **somnomedics.eu**

SOMNOmedics GmbH designs, manufactures, markets, distributes and services products dedicated to sleep diagnostics. Our products are utilized for a variety of sleep related tests and comply with the AASM standards. SOMNOmedics devices are small, lightweight and worn by the patient. We are compatible with in lab diagnostics as well as home sleep testing. SOMNOmedics wireless solution allows patients video, audio and data to be observed from any environment.

SH12 **seaasm.org**

South East Asian Academy of Sleep Medicine (SEAASM) was formed in 2013 with the aim of bridging the gap in sleep medicine and work toward enlightening the medical fraternity and public at large about the next Asian epidemic of sleep disorders. South Asian countries have joined in creating awareness of sleep disorders, promoting learning and enhancing knowledge in the South East Asian part of the world.

327 **suven.com**

Suven Life Sciences. SUVN-G3031 is a novel, best-in-class and well-differentiated clinical candidate for the treatment of narcolepsy with and without Cataplexy. SUVN-G3031 is an orally-active, highly-selective Histamine H3 receptor inverse agonist with robust wake promoting effects, excellent safety profile and once-a-day dosing. Phase-2 study is being initiated.

Bronze Sponsor

105 **takeda.com**

Takeda is a patient-focused, values-based, R&D-driven global biopharmaceutical company committed to bringing Better Health and a Brighter Future to people worldwide. Our passion and pursuit of potentially life-changing treatments for patients are deeply rooted in over 230 years of distinguished history in Japan.

421 **tanzenmed.com**

Tanzen Medical is commercializing RestEaZe™, an at-home sleep aide that uses machine learning on leg movement characteristics. It identifies micro-cortical arousals, PLMS and sleep position. RestEaZe™ reveals sleep quality, circadian patterns, sleep apnea, RLS, and REM behavior disorder. RestEaze™ can evaluate oral iron treatments, and provide guides for improving sleep.

214 **theresamonsterinmycloset.com**

There's a Monster in My Closet is dedicated to supporting families in finding healthy sleep solutions. We provide resources and services that educate on stages of sleep development, drivers of sleep behavior, and the importance of sleep health in young children. We believe every child deserves a healthy sleep foundation.

425 **truedark.com**
TrueDark® is a health and wellness technology brand that is committed to improving well-being while leveraging light. Through the use of patent-pending light blocking/filtering eyewear and innovative light therapy devices, our goal is to help you sleep, look, feel, and perform better.

508 **vitalaire.ca**
VitalAire is Canada's leading provider of sleep apnea treatment and Sleep Lab support at over 100 locations from coast to coast.

107 **wakeupnarcolepsy.org**
Wake Up Narcolepsy is a 501(c)(3) not for profit organization dedicated to advancing the knowledge of Narcolepsy to find a cure, as we strengthen families and individuals. We do this by raising awareness, funding research, and maintaining a strong community of support. As an advocacy organization, we work with patients, caregivers, clinicians, researchers, and educators to facilitate a high level of understanding and expertise.

445 **wellwise.ca**
Wellwise by Shoppers Drug Mart strives to help Canadians to take charge of the way they age. We offer a wide range of products and specialized services, such as CPAP & Sleep Therapy, to help you stay active and well.

Registration Area **societyservices.ondemand.org**
Wolters Kluwer, provider of World Sleep OnDemand, captures content from the world's most preeminent medical association events and then transforms those events into innovative online education using the best technology in the market. For more information, visit us at societyservices.ondemand.org.

SH1 **worldsleep.info**
World Sleep Foundation fosters international exchanges among scientists, physicians, psychologists, nurses, physician assistants, technologists, pediatricians, dentists & oral surgeons and other medical & research personnel in the sleep field. World Sleep Society operates under the World Sleep Foundation.

314 **xlear.com**
Xlear Inc., formed in 2000, is recognized as the leading manufacturer of xylitol-based products in North America. Our goal is to provide simple and cost-effective prevention so people can live healthy and fulfilling lives. With industry-leading innovations in our drug-free sinus care and with our leading oral care brand, Spry Dental Defense System, we are dedicated to helping our users to live a happy and healthy, on-the-go lifestyle.

616 **zerogravityskin.com**
Zero Gravity is a lead wholesaler of LED medical devices for pain management and skin rejuvenation.

Leading the way in sleep medicine.

Jazz Pharmaceuticals, a global biopharmaceutical company, is committed to addressing unmet needs in sleep medicine by delivering meaningful treatment options to patients.

Jazz is an industry leader in sleep medicine innovation with a robust R&D program focused on enhancing our current therapies and developing new treatments for patients with chronic and often debilitating sleep disorders.

JazzPharmaceuticals.com

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