Scientific Programme

Tuesday, 25 September 2018

Track General, Teaching Course, Darwin

09:00 - 12:30 Teaching Course 3 - Without sleep but during sleep - the dilemma of cardio-respiratory polygraphy A practical scoring course

Session summary:
The use of cardiorespiratory polygraphy in sleep medicine, in particular in the diagnosis of sleep disordered breathing, is widespread within Europe. Numerous validation studies have demonstrated the strengths and limitations of the methodology. However, as we aim to diagnose medical conditions and disorders associated with sleep, the method of polygraphy is limited due to the fact that no EEG-based parameter is included to detect or exclude sleep, sleep stages or arousal from sleep. This teaching course aims to give practical advice, based mainly on case demonstrations, how the use of cardiorespiratory polygraphy can give the users essential information on relevant sleep disorders despite the above mentioned conceptual dilemma. Hopefully, this course helps you to work more sophisticated with cardiorespiratory polygraphy and to be aware but also to overcome its limitations.

Learning outcomes:
1. Knowledge and logic behind current scoring guidelines
2. How to distinguish between wakefulness and sleep during cardiorespiratory polygraphy (CRPG)?
3. Differential diagnosis central and obstructive breathing disorders
4. Cardiovascular manifestations of sleep-related breathing disorders
5. Motor disorders during sleep - the picture in the CRPG
6. Referrals within the hospital: Acute disease and their manifestations during sleep

During the course the following will be discussed:
• Sleep-related respiratory disturbances - a bit more tricky cases
• Monitoring of ventilator treatment - sleep doctor's nightmare?
• Emergency consultation and consultant measurements at the hospital - A new dimension for sleep unit?
• Not a real apnea - but strange! Some diagnoses from the ICSD in the CRPG!
  (ICSD = International classification of sleep disorders)

Chairs
L. Grote (Gothenburg, SE)
H. Schneider (Baltimore, US)

09:00 - 09:20 Introduction: Scoring cardiorespiratory polygraphy: rules, obstacles and strategies
L. Grote (Gothenburg, SE)

09:20 - 09:40 Scoring of central sleep disordered breathing events
H. Schneider (Baltimore, US)

09:40 - 10:15 Arterial tonometry: a new approach to address diagnostic procedures with level 3 devices - Theory and practical examples
H. Schneider (Baltimore, US)
L. Grote (Gothenburg, SE)

10:15 - 10:30 Break
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Tuesday, 25 September 2018

10:30 - 12:30  
Sleep medicine clinics - Practical scoring of patients cases studied with cardiorespiratory polygraphy - a guided, interactive scoring session  
H. Schneider (Baltimore, US)  
L. Grote (Gothenburg, SE)

09:00 - 12:30  
Teaching Course 1 - Year in review - Sleep mechanisms and functions  
The three speakers will review the recent publications devoted to sleep mechanisms and functions both in humans and animals. They will in particular review latest breakthroughs in circadian regulation, role of sleep in learning and memory, neuronal network responsible for the sleep-waking cycle, translational studies on the mechanisms at the origin of RBD, narcolepsy, insomnia and sleep apnea.

Chairs  
T. DeBoer (Leiden, NL)  
P. Peigneux (Bruxelles, BE)  
P.-H. Luppi (Lyon, FR)

09:00 - 10:00  
Circadian system  
T. DeBoer (Leiden, NL)

10:00 - 10:30  
Human sleep functions  
P. Peigneux (Bruxelles, BE)

10:30 - 11:00  
Coffee break

11:00 - 11:30  
Human sleep functions (continued)  
P. Peigneux (Bruxelles, BE)

11:30 - 12:30  
Sleep mechanisms and functions  
P.-H. Luppi (Lyon, FR)

Track General, Teaching Course, Boston 2

09:00 - 12:30  
Teaching Course 5 - Techniques in sleep research and medicine  
The course is intended to present to the participant an overview of basic and advanced methods in sleep evaluation and measures. The information is intended for participants interested into human sleep research and sleep medicine.

Chairs  
P. Jennum (Glostrup, DK)

09:00 - 09:30  
Evaluation of sleep and daytime function: Questionnaire - Uses, application and limitations in sleep research and medicine  
D. Riemann (Freiburg, DE)
**Scientific Programme**

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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 09:30 - 10:00 | Polysomnography/polygraphy. Indications, evaluation, uses of manual, semiquantified and quantitated evaluations. Pro and cons  
   P. Jennum (Glostrup, DK) |
| 10:00 - 10:30 | Measures for vigilance: Multiple Sleep Latency Test (MSLT), Maintenance Wakefulness Test (MWT), The Sustained Attention to Response Test (SART). Strength and limitations  
   M. Partinen (Helsinki, FI) |
| 10:30 - 11:00 | Break |
| 11:00 - 11:30 | Circadian measures: actigraphy, temperature. Wearable devices for long term polygraphic recordings, smart phones in sleep research  
   T. Penzel (Berlin, DE) |
| 11:30 - 12:00 | Imaging techniques (visualization of brain structures including brain stem and midbrain, fMRI, PET, others)  
   D. Arnaldi (Genoa, IT) |
| 12:00 - 12:30 | Molecular methods in diagnosing sleep and sleep disorders (orexin, melatonin, cortisol, MCH, adenosine, histamine, GWA)  
   Y. Dauvilliers (Montpellier, FR) |

**Track Human Sleep, Other Session, Boston 3**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 09:00 - 12:30 | NATUS - Clinical PSG/PG scoring & interpretation workshop - Part I  
   The session will be presented by Amr Obeidat.  
   **Chairs**  
   A. Obeidat (Middleton, US) |
| 09:00 - 09:45 | Recommended & alternative sensors |
| 09:45 - 10:30 | AASM Guidelines for Scoring Sleep Stages & Arousals |
| 10:30 - 11:00 | Coffee Break |
| 11:00 - 12:30 | Case discussion I - Scoring Sleep Stages & Arousals |

**Track General, Teaching Course, Darwin**

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 13:00 - 16:30 | Teaching Course 2 - Year in review - Clinical  
   **Chairs**  
   L. Nobili (Milan, IT) |
| 13:00 - 14:10 | Sleep related movement disorder  
   M. Manconi (Lugano, CH) |
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14:10 - 15:20  Narcolepsy and hypersomnia
               Y. Dauvilliers (Montpellier, FR)

15:20 - 16:30  Sleep disordered breathing (SDB)
               W. Randerath (Solingen, DE)

Track General, Early Career Day, Boston 1

13:00 - 16:30  Early Career Day - Selling your science

   Chairs
   K. Porcheret (Oxford, UK)

13:00 - 13:05  Welcome and introduction
               K. Porcheret (Oxford, UK)

13:05 - 14:30  Selling your science to the public
               N. Koop (Amsterdam, NL)
               W. Kuijpers (Amsterdam, NL)

14:30 - 15:00  Coffee break

15:00 - 15:20  Selling your science to the public
               N. Koop (Amsterdam, NL)
               W. Kuijpers (Amsterdam, NL)

15:20 - 16:20  Selling your science to scientists
               E. Arnardottir (Reykjavik, IS)

16:20 - 16:30  Election for new committee members

Track General, Teaching Course, Boston 2

13:00 - 16:30  Teaching Course 4 - Digital Sleep: internet and smartphone application for sleep

   Chairs
   H.-P. Landolt (Zurich, CH)

13:00 - 14:10  Digitalization, miniaturization and networks: medicinal-technical innovation for sleep medicine
               H. Malberg (Dresden, DE)

14:10 - 15:20  Mobile and wearable systems for monitoring sleep and sleep disorders
               W. Karlen (Zurich, CH)

15:20 - 16:30  Can we use smartphone behavior to learn how sleep-wake disease impacts our day-to-day lives?
               A. Ghosh (Leiden, NL)
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Tuesday, 25 September 2018

13:00 - 17:00

Track Human Sleep, Other Session, Boston 3

**NATUS - Clinical PSG/PG scoring & interpretation workshop - Part II**

The session will be presented by Amr Obeidat.

**Chairs**
A. Obeidat (Middleton, US)

13:00 - 13:45

**AASM Guidelines for scoring respiratory events**

13:45 - 14:30

**Case discussion II-Scoring Respiratory events**

14:30 - 15:00

**Coffee Break**

15:00 - 15:45

**AASM Guidelines for scoring Limb Movements**

15:45 - 16:15

**Case Discussion III- Scoring Limb Movements**

16:15 - 17:00

**What are you missing from the interpretation of PG recording?**

17:00 - 19:05

Track General, Opening/Closing Session, San Francisco

**Opening Session & Young Scientist Symposium**

**Chairs**
W. McNicholas (Dublin, IE)
C. Cajochen (Basel, CH)

17:00 - 17:25

**Welcome words and entertainment**

17:25 - 17:50

**European Sleep Science Award**

17:50 - 18:00

**Entertainment**

**Young Scientist Symposium**

18:00 - 18:05

**Introduction to Young Scientist Symposium**

18:05 - 18:20

**O001** Preserved neuron reactivity dynamics during prolonged wakefulness is linked to cognitive fitness in aging, independently of tau and amyloid beta burden
M. Van Egroo (Liège, BE)

18:20 - 18:35

**O002** Discovering the role of miR-709 in the sleep homeostatic process
K. Kompotis (Lausanne, Vaud, CH)

18:35 - 18:50

**O003** Symptom-based clinical subtypes of obstructive sleep apnoea show differences in spectral power and immediate post-arousal dynamics
D. Mazzotti (Philadelphia, PA, US)

18:50 - 19:05

**O004** The impact of treating insomnia upon functional health, psychological wellbeing and sleep-related quality of life: a randomised controlled trial with mediation analysis
A.I. Luik (Oxford, Oxfordshire, UK)
Neuropsychiatry Track, Symposium, San Francisco

08:30 - 10:30

Unraveling the neurobiology of sleep in normal ageing and in neurodegeneration

Sleep disturbances are distinct clinical symptoms of most neurodegenerative disorders that are currently understood both as a risk factor for neurodegeneration in preclinical dementia, and as a consequence of neuronal loss in full-blown dementia and of alpha-synuclein pathology in REM sleep behavior disorder. This symposium will provide an overview of several mechanisms that are currently being considered to tie sleep to neurodegeneration with a focus on Alzheimer disease (AD) and alpha-synucleinopathies.

The neuropathological hallmarks of AD include amyloid plaques, tau neurofibrillary tangles (NFTs) and neuronal/synaptic loss. A bidirectional relationship between slow wave sleep (SWS) and amyloid β (Aβ) has been established with decreased slow wave activity leading to increased Aβ production whereas Aβ deposition is associated with increased disruption of sleep. The influence of tau pathology is likely important. Abnormal tau is the earliest observable AD-like pathology in the brain with NFT formation occurring in many sleep regulating regions such as the locus coeruleus and basal forebrain. Thus far, it has been associated with increases in orexin levels, short REM duration and decreases in spindle formation. IRBD is characterized by the loss of physiological muscle atonia with abnormal behavior during REM sleep. IRBD is now considered an early stage alpha-synucleinopathy rather than a prodromal phase of this disease, due to the high rate of conversion over time and the presence of biomarkers of alpha-synuclein pathology.

The symposia, which will include two ESRS members and two early career researchers will address, from the basic to the clinical level, first the relation between sleep oscillations (SWS, k-complexes, sleep spindles) and the physiology of Aβ and tau, followed by the relationship between orexinergic signaling overexpression, the disruption of the sleep-wake cycle and AD pathology. We will continue by showing the attendees the latest evidence on two clinical sleep disorders: IRBD, where the potential and relevance of several markers of neurodegeneration will be discussed, with a focus on implications for neuroprotective trials; and obstructive sleep apnea (OSA) where we will show the latest evidence on how OSA is associated with changes in brain structure and function in late life.

Chairs
R. Osorio (New York, US)
N. Gosselin (Montreal, CA)

08:30 - 09:00  5  Sleep oscillations and the pathogenesis of Alzheimer´s disease
R. Osorio (New York, US)

09:00 - 09:30  6  Orexin and Alzheimer´s disease
C. Liguori (Rome, IT)

09:30 - 10:00  7  Isolated RBD, an early stage of α-synucleinopathy
B. Högl (Innsbruck, AT)

10:00 - 10:30  8  Is OSA associated with pathological aging? A neuropsychological and neuroimaging perspective
N. Gosselin (Montreal, CA)
Scientific Programme

Wednesday, 26 September 2018

08:30 - 10:30

**Track Translational, Symposium, Sydney**

**Circadian modulation of EEG brain activity and cognition, and the impact of light on sleep**

Cognitive processes vary over the 24-h day. Time-of-day dependent changes in cognition are modulated by an internal circadian system and sleep-wake regulatory processes to control brain arousal and cognitive function. The circadian system modulates cognition by projections from the circadian clock to arousal and sleep systems via clock gene oscillations in brain tissues. There is evidence that light has three main consequences on human sleep at night: 1) it acts as a ‘Zeitgeber’ and modulates sleep timing and quality; 2) it has repercussions on circadian rhythm amplitude, sleep homeostasis and sleep architecture and 3), different light spectra modulate sleep EEG power density.

In this symposium, Stuart Peirson (Oxford University) will describe the neurobiological mechanisms mediating the effects of circadian rhythms and light on recognition memory in animal models, and the role of sleep in these processes. We will then move to human studies to uncover circadian and sleep loss effects on cognition as well as light effects on sleep. Appropriate alignment between the circadian system and the society demands for sleep/wake times promotes optimal performance. On the other hand, misalignment between these two systems – as typically experienced by night shift workers, who are ~10-15% of industrialized workforce – may hinder performance. Sarah L. Chellappa (Harvard University) will discuss how daily circadian misalignment and sleep history negatively affect how we perform at night, thus posing a serious risk for human operational errors.

The impact on sleep of too little light during the day and too much in the evening/night as well as mistimed sleep episodes have attracted much interest because there are consequences not only on alertness and cognition but also on a variety of physiological and psychological functions, including sleep. Marijke Gordijn (University of Groningen) will present several field and lab studies showing the relationship between daytime light exposure and EEG sleep architecture, slow-wave activity, and sleep quality in young healthy office workers. Finally, Mirjam Münch (Charité University Medicine Berlin) will present evidence supporting a role for different colors of light exposures before bedtime leading to different effects on EEG slow-wave activity and on REM sleep.

**Chairs**

M. Münch (Berlin, DE)
S. Chellappa (Boston, US)

08:30 - 09:00  **The role of light in regulating alertness and performance in mice**
S. Peirson (Oxford, UK)

09:00 - 09:30  **Effects of the circadian system and circadian misalignment on cognition in non-shift workers and chronic shift workers**
S. Chellappa (Boston, US)

09:30 - 10:00  **Relationship between daytime light exposure and EEG sleep architecture, slow-wave activity, and sleep quality in young healthy office workers**
M. Gordijn (Groningen, NL)

10:00 - 10:30  **Impact of different light exposures in the evening on EEG slow-wave activity and REM sleep**
M. Münch (Berlin, DE)
Scientific Programme

Wednesday, 26 September 2018

08:30 - 09:30  
**Sleep and driving**

**Chairs**
J. Mathis (Berne, CH)
J.L. Pepin (Grenoble, FR)

08:30 - 08:42  O017  
**Maintenance of Wakefulness Test, real and simulated driving in narcolepsy/hypersomnia patients**
P. Sagaspe (Bordeaux, FR)

08:42 - 08:54  O018  
**To predict sleep related accidental risk of patients with obstructive sleep apnea syndrome: self reported sleepiness at the wheel versus Apnea Hypopnea Index**
P. Philip (Bordeaux, FR)

08:54 - 09:06  O019  
**Diagnostic patterns of sleep- and vigilance tests in distinct causes of excessive daytime sleepiness**
D. Andres (Bern, CH)

09:06 - 09:18  O020  
**Moderate and severe OSA in males impair psychomotor reaction times assessed by CRD-series testing**
Z. Dogas (Split, HR)

09:18 - 09:30  O021  
**A pre-drive ocular assessment predicts subsequent driving impairment: a naturalistic driving study in shift workers**
M.D. Mulhall (Melbourne, VIC, AU)

08:30 - 10:30  
**New methods in basic and clinical sleep research**

**Chairs**
P. Achermann (Zurich, CH)
L. Tarokh (Berne, CH)

08:30 - 08:42  O022  
**Environmental influence on the behaviorally defined sleep (rest) in a wild nocturnal primate Nycticebus javanicus**
K. Reinhardt (Oxford, UK)

08:42 - 08:54  O023  
**Two million nights to characterize sleep heterogeneity: what objective and self report big data tell us**
R.J. Raymann (Carlsbad, CA, US)

08:54 - 09:06  O024  
**Studying the Temporal Dynamics of Human Sleep in Real Life and Large Numbers**
E. Winnebeck (Munich, DE)

09:06 - 09:18  O025  
**Scoring sleep with artificial intelligence enables quantification of sleep stage ambiguity**
P. Anderer (Vienna, AT)
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09:18 - 09:30  O026  New spectral analysis method to identify trait-like features in NREM sleep power spectra
G. Hammad (Liège, BE)

09:30 - 09:42  O027  Cognitive functioning following sleep deprivation is moderated by time-of-day: results from the Karolinska WakeApp
B.C. Holding (Stockholm, SE)

09:42 - 09:54  O028  A computer algorithm to quantify REM sleep without atonia
A. Papakonstantinou (Berlin, DE)

09:54 - 10:06  O029  Evaluation of night-to-night variability of sleep apnea in home polysomnography
L. Rohling (Zwolle, Overijssel, NL)

10:06 - 10:18  O030  Accuracy of detecting sleep apnea using machine-held submental ultrasonography
P.-L. Lee (Taipei, TW)

10:18 - 10:30  O031  Cerebral free-water imaging with obstructive sleep apnea severity
A.-A. Baril (Montreal, QC, CA)

Track General, ESST Meeting, Rio

08:30 - 10:30  ESST Meeting - Session 1 - The state of the art in sleep technology

Chairs
L. Hill (Edinburgh, UK)

08:30 - 09:00  Sign in and welcome

09:00 - 09:30  Recent advances in sleep treatments
R. Tijdens (NL)

09:30 - 10:00  Beyond the AHI
E. Arnardottir (Reykjavik, IS)

10:00 - 10:30  Tracheal sounds during sleep
S. Launois (Paris, FR)
Scientific Programme

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Track Human Sleep, Symposium, Montreal

09:00 - 10:30

The Big Sleep: unraveling insomnia using big data

Big data is increasingly recognized as providing an important new impetus to unravel the mechanisms underlying complex human behavioral, cognitive and emotional traits as well as physiology and its disorders. UKBiobank, 23andMe, ENIGMA and other cohorts and collaborations now allow for genetically informed studies in unprecedented sample sizes and sensitivity. But are sleep researchers and clinicians sufficiently aware of the opportunities provided by these big data? In spite of insomnia being the most common sleep complaint and sleep disorder, the use of big data to unravel its underlying mechanisms has started late, but is now catching up with exciting pace and findings. The present symposium integrates the most recent, exciting findings on how big data can help us unravel mechanisms of sleep and its disorders. The focus of the symposium will be on causes, correlates and consequences of insomnia. The presenters are optimally balanced with respect to both gender and career stage.

The symposium opens with a concise integrative introduction by the chair. Tiina Paunio, the first, senior, speaker will provide an integrated overview of how large-scale epidemiological and twin studies help us understand risks, causes, correlates and consequences of insomnia. Tessa Blanken, the second speaker, a 3rd year PhD-graduate early career researcher, will subsequently show how extensive phenotyping of personal history and traits in a large sample reveals previously unrecognized subtypes among people suffering from insomnia, with marked differences in mental health risks. She will moreover illustrate the use of network analysis on large datasets to unravel how multiple symptoms influence each other. Philip Janssen, the third speaker, a 4th year PhD-graduate early career researcher, will then discuss the exciting latest findings on insomnia as revealed by the largest genetics and brain imaging datasets. Valter Tucci, the final, senior, speaker will complete the integrative translational view of the symposium by showing how to employ information revealed from big data for functional analyses in mouse models to tease out the genetic and epigenetic mechanisms.

Chairs
E. Van Someren (Amsterdam, NL)
V. Tucci (Genoa, IT)

09:00 - 09:30

Epidemiology, genetic models and epigenetics of insomnia
T. Paunio (Helsinki, Finland, FI)

09:30 - 10:00

Trait and life history profiles reveal stable insomnia subtypes
T.F. Blanken (Amsterdam, NL)

10:00 - 10:30

Modelling sleep disorders in mice
V. Tucci (Genoa, IT)

Basic Track, Oral Session, Singapore

09:30 - 10:30

Sleep, -omics and novel cellular and molecular mechanics

Chairs
M. Tafti (Lausanne, CH)
S. Brown (Zurich, CH)
Scientific Programme

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09:30 - 09:42 O032 Predicted gene expression in the brain is associated with sleep macrostructure in healthy young individuals
P. Ghaemmaghami (Liege, BE)

09:42 - 09:54 O033 The cortical synaptic transcriptome is organized by clocks, but its proteome is driven by sleep
S. Noya (Zurich, Zurich, CH)

09:54 - 10:06 O034 mGluR5-dependent nuclear speckle assembly drives sleep-wake transcriptomics
A. Spinnler (Zürich, CH)

10:06 - 10:18 O035 RNA-Seq analysis of the impact of sleep deprivation in medial prefrontal cortex of young and old mice
X. Guo (Philadelphia, PA, US)

10:18 - 10:30 O036 The effects of insufficient sleep on microglial morphology and functional state
H.-K. Wigren (Helsinki, FI)

Neuropsychiatry Track, Case Discussion, San Francisco

11:00 - 12:00 Case Discussion - Parasomnias, movement disorders of sleep and paroxysmal disorders

Chairs
B. Högl (Innsbruck, AT)

11:00 - 11:20 Standing up and walking during the night: not always a disorder of arousal
F. Provini (Bologna, IT)

11:20 - 11:40 RBD or something else?
J. Santamaria (Barcelona, ES)

11:40 - 12:00 PLMS without RLS: video and case discussion
M. Manconi (Lugano, CH)
Preclinical systematic reviews and meta-analysis in sleep research

Systematic reviews (SRs) and meta-analyses (MAs) are frequent and well established in clinical research, but still uncommon in animal experimentation. However, recent publications have highlighted several important advantages of SRs and MAs for animal studies, both from experimental and ethical perspectives. Among these advantages, one may highlight its potential to reanalyze data on a given field of animal research, providing conclusive results; to evaluate how applicable animal research is in order to replicate human conditions; and to optimize the use of animal resources, by avoiding duplicate studies. Consequently, these methodological approaches have gained importance over the last few years, also from a translational point of view, and several SRs and MAs of animal research have been published.

The scientific output of articles about sleep in animal research turned out to be prolific, especially on the fields of sleep deprivation and mechanisms. As an example, about 1200 new articles about sleep research using animal models are indexed on PubMed each year. However, due to the large set of data available, as well as due to methodological heterogeneity and inconsistencies among results, overall and definitive conclusions on the fields addressed by preclinical sleep research are hard to achieve. Considering the complexity of the involved factors, the most appropriate way to provide a reasonable summary of data is through SRs and MAs.

To the best of our knowledge, the first endeavor in the field of SRs of animal data in sleep research was published in 2016 by researchers from the Federal University of São Paulo, Brazil, who evaluated the effects of sleep deprivation on anxiety-like behavior in rodents. Since then, some other investigators have started using SRs and MAs to evaluate sleep in different research contexts, attesting these methods as experimental tools with remarkable potential in sleep research. We therefore believe a symposium on this field would meet the needs of the next ESRS congress’ attendees, introducing an emerging and highly useful methodological approach. It will be composed by an initial introduction on the field, followed by three successful cases of SRs and MAs of preclinical sleep studies.

**Chairs**

M. Andersen (São Paulo, BR)

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<th>Session</th>
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<tbody>
<tr>
<td>11:00</td>
<td><strong>Introduction to systematic review and meta-analysis of preclinical animal studies</strong> M. Andersen (São Paulo, BR)</td>
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<td>11:07</td>
<td><strong>Meta-analysis on the relationship between sleep deprivation and anxiety in rodents</strong> G. Pires (São Paulo, BR)</td>
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<tr>
<td>11:14</td>
<td><strong>Adenosine and sleep: a systematic review and meta-analyses of the preclinical literature</strong> C.H. Leenaars (Nijmegen, NL)</td>
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<td>11:21</td>
<td><strong>Systematic review on the relationship between monoamines and sleep</strong> J.M. Menon (Nijmegen, NL)</td>
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<tr>
<td>11:28</td>
<td><strong>Discussion</strong></td>
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**Basic Track, Oral Session, Sydney**

11:00 - 12:00  
**Lack of sleep: effects on periphery and the brain**

Chairs  
M. Short (Adelaide, SA, AU)  
A. Lazar (Norwich, Norfolk, UK)

11:00 - 11:12  
**O041 Effects of sleep restriction on glucose tolerance in adolescents**  
J. Gooley (Singapore, SG)

11:12 - 11:24  
**O042 The relationship between adolescents’ sleep spindles and cognitive performance following experimental sleep restriction**  
C.M. Reynolds (Adelaide, SA, AU)

11:24 - 11:36  
**O043 Association between individual impairments in glucose metabolism and cognitive performance in response to sleep restriction**  
E.-M. Elmenhorst (Cologne, DE)

11:36 - 11:48  
**O044 Investigation of the neural substrates underlying the homeostatic sleep response in the basal forebrain**  
H. Bouaouda (West Roxbury, MA, US)

11:48 - 12:00  
**O045 ‘Waking at a lower cost’: running wheel access reduces sleep propensity**  
L. Milinski (Oxford, UK)

**Track General, ESST Meeting, Rio**

11:00 - 13:30  
**ESST Meeting - Session 2 - Hot topics in sleep medicine**

Chairs  
C. Teixeira (Porto, PT)

11:00 - 12:00  
**Keynote: Healthy sleep, healthy brain: sleep, circadian rhythms and mechanisms of cognitive decline in the human brain**  
A. Lim (Toronto, CA)

12:00 - 12:30  
**Talk: Sleep apnoea in women**  
A. Ryckx-Gheeraert (Basel, CH)

12:30 - 13:15  
**Lunch break**

13:15 - 13:30  
**Compumedics lunchtime talk (sponsored)**  
D. Vermeiren (Brussels, BE)

**Poster Session, Poster, Poster Exhibition**

11:00 - 12:00  
**Poster Session 1 - Poster viewing**
Scientific Programme

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12:00 - 13:00  Cellular, molecular biology & genetics

**Chairs**
G. Zoccoli (Bologna, IT)

12:00 - 12:03  P001  Insulin resistance and leptin levels in patients with obstructive sleep apnea
A. Khajeh-Mehrizi (Tehran, IR)

12:03 - 12:06  P002  Genetic risk factors for schizophrenia associate with sleep spindle activity in healthy adolescents
I. Merikanto (Helsinki, FI)

12:06 - 12:09  P003  Neuron-specific interleukin-1 receptor accessory protein is required for the maturation of small network emergent sleep-like electrophysiological properties
J. Krueger (Spokane, WA, US)

12:09 - 12:12  P004  Effect of cyclical intermittent hypoxia on mouse model of Ad5CMVCre induced solitary lung cancer progression and spontaneous metastases in KrasG12D+; p53fl/fl; myristolated p110fl/fl ROSA-gfp
D. Lim (Philadelphia, PA, US)

12:12 - 12:15  P005  Key elements in biology and physiology of Hcrt and Mch cells affecting normal sleep
A. Seifinejad (Lausanne, VD, CH)

12:15 - 12:18  P006  Oxidative stress in Caucasian and Asian menopausal women with sleep disorders
N. Semenova (Irkutsk, RU)

12:18 - 12:21  P007  Melatonin receptor type 1A gene linked to intolerance to shift work and Alzheimer’s disease in old age
S. Sulkava (Helsinki, FI)

12:21 - 12:24  P008  The impact of insufficient sleep on microglia morphology
S. Steffens (Helsinki, Uusimaa, FI)

12:24 - 12:27  P009  Epigenetic age and sleep quality in adolescence
L. Kuula (Helsinki, FI)

12:27 - 12:30  P011  GABAA receptors of the thalamic reticular nucleus regulate NREM delta oscillations: an in vivo investigation by CRISPR-Cas9 genetic abscission
D.S. Uygun (West Roxbury, MA, US)

12:30 - 12:33  P012  CLOCK gene polymorphism (rs1801260) in menopausal women of two ethnic groups with insomnia
N. Semenova (Irkutsk, RU)

12:33 - 12:36  P013  The role of melanin concentrating hormone and orexin/hypocretin neurons in the Prader-Willi syndrome
M. Pace (Genova, IT)
Scientific Programme

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12:36 - 12:39  P014  Characterization of sleep architecture and oscillations in a mouse model with reticular thalamic nuclear dysfunction  
C. Gutierrez Herrera (Bern, CH)

12:39 - 12:42  P015  CDK5-mediated phosphorylation of PER2 regulates circadian clock  
U. Albrecht (Fribourg, CH)

12:42 - 12:45  P016  Sleep-wake and thermoregulatory changes in Panx1-/- mice  
V. Kovalzon (Moscow, RU)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  
Dreaming

Chairs  
F. Siclari (Lausanne, CH)

12:00 - 12:03  P017  The degree of lucidity experienced in dreaming could reflect the capacity of conflict resolution in cognitive control  
M.-R. Loo (Taoyuan, TW)

12:03 - 12:06  P018  A technique for inducing high levels of signal-verified lucid dreams in a laboratory morning nap  
M. Carr (Swansea, UK)

12:06 - 12:09  P019  Electrophysiological response to emotional voices during sleep and wakefulness as a function of stimulus-reactivity  
M. Moyne (Geneva, CH)

12:09 - 12:12  P021  Relationship between EEG frontal alpha asymmetry and dream affect  
P. Sikka (Turku, FI)

12:12 - 12:15  P022  Increase of both bottom-up and top-down attentional processes in high dream recallers  
P. Ruby (Bron Cedex, FR)

12:15 - 12:18  P023  PTSD-like symptoms, morning affect and intrusive memories in nightmare disorder  
B. Blaskovich (Budapest, HU)

12:18 - 12:21  P024  Testing the empathy theory of dreaming: the relationship between trait empathy and positive attitude towards dreams and the frequencies of listening to and telling dreams  
M. Blagrove (Swansea, UK)

12:21 - 12:24  P025  Emotions in dreams correlate with coping style  
A. Coppola (Caserta, IT)

12:24 - 12:27  P026  Dreams of children with neurodevelopmental disorders: autism spectrum and attention deficit/hyperactivity  
R. Godbout (Montreal, QC, CA)
Scientific Programme

Wednesday, 26 September 2018

12:27 - 12:30  P027  Efficacy of cognitive behavioral therapy for insomnia on nightmares in veterans with PTSD  
H. Barilla (Philadelphia, PA, US)

12:30 - 12:33  P028  Emotions in REM dream reports in healthy women  
T. Paiva (Lisbon, PT)

12:33 - 12:36  P029  Sleep inertia and functional connectivity between brain regions at awakening in high and low dream recallers: an EEG-fMRI study  
P. Ruby (Bron Cedex, FR)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  Sleep physiology 1

Chairs  
A. Lazar (Norwich, Norfolk, UK)

12:00 - 12:03  P030  Sleep EEG topography as an endophenotype: insights from an adolescent twin study  
A. Markovic (Bern, CH)

12:03 - 12:06  P031  Event-related analysis of awakenings due to road traffic noise at night: a polysomnographic field study  
S. Weidenfeld (Cologne, DE)

12:06 - 12:09  P032  Light-induced sleep is homeostatically regulated in mice  
S. Hasan (Oxford, OXON, UK)

12:09 - 12:12  P033  Wanderlust - travelling and stationary sleep oscillations  
L. Himmer (Tübingen, DE)

12:12 - 12:15  P034  Alteration of sleep and wake triggered by chronic social defeat stress in mice  
F. Henderson (Paris, FR)

12:15 - 12:18  P035  Cold-Inducible RNA Binding Protein contributes to quality of waking, REM sleep homeostasis, and modulates the cortical molecular response to sleep deprivation  
M. Hoekstra (Lausanne, CH)

12:18 - 12:21  P036  Does chronic exposure to electromagnetic fields combined with noise has effects on sleep and homeostasis in juvenile rats?  
A. Bosquillon de Jenlis (Amiens, FR)

12:21 - 12:24  P037  The dynamic of consciousness loss when falling asleep  
M. Strauss (Gif/Yvette, FR)

12:24 - 12:27  P038  Effects of selective silencing of layer 5 pyramidal neurons on sleep-wake distribution and local cortical EEG activity  
L. Krone (Oxford, UK)
Scientific Programme

Wednesday, 26 September 2018

P039
Sleep and cardio-metabolic risk in regional dwelling individuals
S. Yiallourou (Melbourne, VIC, AU)

P040
Hypocretin in footshock stimulation-induced REM sleep suppression
P.-L. Yi (New Taipei City, TW)

P041
Analysis of day and night-time stress markers after sleeping with nocturnal traffic noise
L. Thiesse (Basel, CH)

P042
Subjective sleepiness: its relationship to actual sleep tendency and neurophysiological changes
M. Matsuo (Otsu, Shiga, JP)

P043
Japanese sake yeast improves human sleep quality and daytime fatigue: a double-blind randomised placebo-controlled clinical trial
Y. Nagamori (Odawara, kanagawa, JP)

P044
Effects of Japanese sake yeast supplementation on human skin quality and analysis of its mechanism
K. Oka (Tokyo, JP)

P045
The role of self-reported feelings of getting sufficient rest on the relationship between quick returns and health complaints
A. Harris (Bergen, NO)

P046
Abrupt shift to slower frequencies after arousal in healthy young adults during sleep
Y. Suzuki (Tsukuba, JP)

P047
Red ears while sleepy: relation between ear skin temperature and sleepiness
M. Schinkelshoek (Leiden, NL)

Chronobiology 1

P049
Later chronotype associates with higher alcohol consumption and more adverse childhood experiences in young healthy women
E. Hug (Basel, CH)

P050
Evening light exposure, sleepiness, sleep timing and duration in college students: an ecological investigation
T. Shochat (Haifa, Northern Israel, IL)

P052
Association between social jetlag and eating duration in Brazilian undergraduate students
G. Teixeira (Uberlândia, BR)
Scientific Programme

Wednesday, 26 September 2018

12:09 - 12:12  P053  Circadian regulation of breath alcohol concentration
J. Gooley (Singapore, SG)

12:12 - 12:15  P054  Dynamics of daytime light exposure in a naturalistic setting impacts on
sleep architecture
A. Wahnschaffe (Berlin, DE)

12:15 - 12:18  P055  Sleep and fatigue in commercial aviation - a field study
W. van Leeuwen (Stockholm, SE)

12:18 - 12:21  P056  Different chronotype profiles impact on children habits before and during
sleep
J.M. Serra-Negra (Belo Horizonte, Minas Gerais, BR)

12:21 - 12:24  P057  Treatment outcome of non-24-hour sleep-wake rhythm disorder: a
retrospective study of 24 consecutive cases in a sleep clinic
M. Hirose (Toyoake, Aichi, JP)

12:24 - 12:27  P058  Randomised controlled trial of bright light therapy and morning activity
for adolescents and young adults with delayed sleep-wake phase
disorder
C. Richardson (Adelaide, SA, AU)

12:27 - 12:30  P059  To explore the impact depression and anxiety has on shift work disorder
risk amongst healthcare shift workers
L. Booker (Heidelberg, VIC, AU)

12:30 - 12:33  P060  Body rhythms in concert? Integrity of circadian rhythms predicts
consciousness levels in severely brain-injured patients
C. Blume (Salzburg, AT)

12:33 - 12:36  P061  Effects of different light expositions on wakefulness, mood, and
attention in shift workers: an ongoing field study in a morning and
evening shift system
A. Rodenbeck (Köln, DE)

12:36 - 12:39  P062  Tasimelteon reentrains sleep period in a patient with phase delay
syndrome
A. Steiger (Munich, DE)

12:39 - 12:42  P063  Evening cronotypes mediate the association between early life stress
and emotion dysregulation in Bipolar Disorder
L. Palagini (Pisa, IT)

12:42 - 12:45  P064  Obstructive sleep apnea as a predictive factor of reduced heart rate
variability
D. Urbanik (Wroclaw, PL)

12:45 - 12:48  P065  Improvements in mood and subjective sleep measures along the course
of adjunctive phototherapy: an open-label study
A. Nixon (Ottawa, ON, CA)
Scientific Programme

Wednesday, 26 September 2018

12:48 - 12:51  P066  Altered regional neuronal activity in shift work associated with sleep and emotion: resting state perfusion MRI study
Y.K. Park (Seongnam-si, Gyeonggi-do, KR)

12:00 - 13:00  Behavior 1

12:00 - 12:03  P068  Sleep coaching provides help for shift workers: a field report
B. Holzinger (Vienna, AT)

12:03 - 12:06  P069  The association between outdoor activity and insufficient sleep among children in China
J. Luo (Guangzhou, CN)

12:06 - 12:09  P070  Iron metabolism in epigenetics: relationship between sleep, physical exercise and movement disorders in an animal model
B. Franco (Limeira, São Paulo, BR)

12:09 - 12:12  P071  Comparison of sleep quality between seafarers working for European and Chinese shipping companies
W. van Leeuwen (Stockholm, SE)

12:12 - 12:15  P072  Factors related to seafarer fatigue and their importance for different categories of seafarers
W. van Leeuwen (Stockholm, SE)

12:15 - 12:18  P073  Cataplexy is reduced after modulation of serotonin transmission
A. Seifinejad (Lausanne, VD, CH)

12:18 - 12:21  P074  Cabin crews' views on managing fatigue and the importance of sufficient rest and company support: a qualitative study
M. van den Berg (Wellington, NZ)

12:21 - 12:24  P075  Night-competition affects sleep quality and perceived recovery in top-level athletes
J.A. Vitale (Milan, IT)

12:24 - 12:27  P076  Actigraphic measurement of physical activity changes due to sleep extension intervention
J.K. Devine (Silver Spring, MD, US)

12:27 - 12:30  P077  Sleep is shortened prior to morning and night shifts in Air Traffic Controllers
J.L. Zaslona (Wellington, NZ)

12:30 - 12:33  P078  Subjective mood and the processing of emotional stimuli following a brief, midday nap
J. Goldschmied (Philadelphia, PA, US)
### Scientific Programme

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<tbody>
<tr>
<td>12:33 - 12:36</td>
<td>P079</td>
<td>Relationship status, sleep patterns and sleep quality - how are they related?</td>
<td>K. Bosancic (Zagreb, HR)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P080</td>
<td>Refraining from smartphone use for 30 minutes before bedtime prevents the extension of the following sleep latency</td>
<td>M. Takahara (Fukushima, JP)</td>
</tr>
<tr>
<td>12:39 - 12:42</td>
<td>P081</td>
<td>Social patterning of inadequate sleep and behavioural sleep problems: findings from the 2016 sleep health foundation Australia survey</td>
<td>A.C. Reynolds (Adelaide, SA, AU)</td>
</tr>
<tr>
<td>12:42 - 12:45</td>
<td>P082</td>
<td>A field-study on the role of sleep in stress resilience in rescue workers: preliminary analyses of wrist-actigraphy and home-polysomnography</td>
<td>I. *Clark (Zurich, CH)</td>
</tr>
<tr>
<td>12:45 - 12:48</td>
<td>P083</td>
<td>Making errors at work due to sleepiness or sleep problems is not limited to shift working populations: results of the 2016 Sleep Health Foundation survey</td>
<td>S. Ferguson (Wayville, SA, AU)</td>
</tr>
<tr>
<td>12:48 - 12:51</td>
<td>P084</td>
<td>Long-term trends of sleep disturbances related with attitude towards the health and cardiovascular prevention in women 25-44 years in Russia/Siberia</td>
<td>D. Panov (Novosibirsk, RU)</td>
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**12:00 - 13:00**

**Learning, memory & cognition 1**

**Chairs**
G. Ficca (IT)

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<tr>
<td>12:00 - 12:03</td>
<td>P085</td>
<td>ADHD symptoms are associated with decreased activity of fast sleep spindles and poorer procedural overnight learning during adolescence</td>
<td>I. Merikanto (Helsinki, FI)</td>
</tr>
<tr>
<td>12:03 - 12:06</td>
<td>P086</td>
<td>Associations between brain oscillation cross-frequency coupling during sleep and declarative learning in healthy older adults</td>
<td>O. Weiner (Montreal, QC, CA)</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P087</td>
<td>Overnight production of false memories in adolescents - associations with sleep EEG and spindles</td>
<td>L. Kuula (Helsinki, FI)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>P088</td>
<td>Baseline cortical activity predicts reactivity to nociceptive stimuli during sleep</td>
<td>H. Bastuji (Lyon, FR)</td>
</tr>
<tr>
<td>12:12 - 12:15</td>
<td>P089</td>
<td>Sleep strengthens spontaneous retrieval processes in prospective memory</td>
<td>R.L.F. Leong (Singapore, SG)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P090</td>
<td>Information processing during sleep is linked to changes in sleep microstructures</td>
<td>M. Ameen (Salzburg, AT)</td>
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<tr>
<td>12:18 - 12:21</td>
<td>P091</td>
<td>The consolidation of cognitive strategies is enhanced by sleep, but not the motor skills needed to acquire it</td>
<td>L.B. Ray (Ottawa, ON, CA)</td>
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<td>12:21 - 12:24</td>
<td>P092</td>
<td>Dynamic of the hippocampus activity during arousing reaction from sleep: an intracranial EEG study</td>
<td>P. Ruby (Bron Cedex, FR)</td>
</tr>
<tr>
<td>12:24 - 12:27</td>
<td>P093</td>
<td>Influence of hypnotic suggestions on spindles, slow oscillations and memory consolidation during sleep</td>
<td>J. Beck (Fribourg, CH)</td>
</tr>
<tr>
<td>12:27 - 12:30</td>
<td>P094</td>
<td>Evaluating short and long-term effects of full-night sleep and heart rate variability on procedural memory performance</td>
<td>F.J. van Schalkwijk (Salzburg, Salzburg, AT)</td>
</tr>
<tr>
<td>12:30 - 12:33</td>
<td>P096</td>
<td>Effectiveness of reappraisal and distraction in regulating emotion across sleep</td>
<td>S. Dhaka (Odisha, IN)</td>
</tr>
<tr>
<td>12:33 - 12:36</td>
<td>P097</td>
<td>The role of sleep spindle activity in consolidating statistical learning in obstructive sleep apnea patients</td>
<td>D. Stevens (Daw Park, SA, AU)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P098</td>
<td>Remembering emotional information over a week: does sleep play any role?</td>
<td>N. Cellini (Padova, IT)</td>
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**12:00 - 13:00**

**Methodology & computation 1**

**Chairs**

V. Muto (Liège, BE)

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<tr>
<td>12:00 - 12:03</td>
<td>P099</td>
<td>Can insomnia be a predictor of attrition in longitudinal studies?</td>
<td>C. Latreille (Trois-Rivières, QC, CA)</td>
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<td>12:03 - 12:06</td>
<td>P100</td>
<td>Concomitant actigraphy and polysomnography at home in different sleep disorders</td>
<td>A. Alakuijala (Helsinki, FI)</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P101</td>
<td>Results from an on-road driving performance study in non-elderly and elderly healthy subjects with dual orexin receptor antagonist lemborexant</td>
<td>A. Vermeeren (Maastricht, NL)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P102</td>
<td>Custom-built electronic referral system for home oximetry studies</td>
<td>C. Kemp (Middlesbrough, UK)</td>
<td></td>
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<tr>
<td>12:12 - 12:15</td>
<td>P103</td>
<td>Sleep prediction algorithm based on machine learning technology</td>
<td>E. Lee (Seoul, KR)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P104</td>
<td>Comparison of automated methods for REM sleep without atonia detection</td>
<td>M. Cesari (Kgs. Lyngby, DK)</td>
<td></td>
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<tr>
<td>12:21 - 12:24</td>
<td>P106</td>
<td>Sleep disorders in Praxeos medicae universae praecepta by Joseph Frank (1771 - 1842)</td>
<td>E. Sakalauskaite-Juodeikiene (Vilnius, LT)</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P108</td>
<td>Influence of daytime activity on hormone secretion in saliva after awakening in infants</td>
<td>M. Ohira (Otsu, Shiga, JP)</td>
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<tr>
<td>12:30 - 12:33</td>
<td>P110</td>
<td>Nodding off but can't disconnect: development and validation of the iNOD index of Nighttime Offline Distress</td>
<td>H. Scott (Glasgow, UK)</td>
<td></td>
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<td>12:33 - 12:36</td>
<td>P111</td>
<td>Gentle rocking stimulation influences the regulation of sleep in poor sleepers</td>
<td>A.A. Perrault (Geneva, CH)</td>
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<tr>
<td>12:36 - 12:39</td>
<td>P112</td>
<td>Bedside approach in the diagnosis obstructive sleep apnea using postprandial oximetry testing. Comparative study with polysomnography</td>
<td>E. Saricam (Ankara, TR)</td>
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<td>12:39 - 12:42</td>
<td>P113</td>
<td>Simulating sleep homeostasis in mice: effects of time of day and waking experience</td>
<td>M.C.C. Guillaumin (Oxford, UK)</td>
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<tr>
<td>12:42 - 12:45</td>
<td>P114</td>
<td>Signatures of the sleep and wake drives identified by comparison of electroencephalographic spectra obtained for different sleep and wake states and sub-states</td>
<td>A. Putilov (Novosibirak, RU)</td>
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<td>12:45 - 12:48</td>
<td>P115</td>
<td>EEG connectivity measures wPLI and wSMI identify distinctive differences in brain functional interactions during wakefulness and sleep</td>
<td>G. Bernardi (Lucca, IT)</td>
<td></td>
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<td>12:48 - 12:51</td>
<td>P116</td>
<td>Quantitative modelling of the direct alerting effects of light</td>
<td>T. Tekieh (Sydney, NSW, AU)</td>
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Scientific Programme

Wednesday, 26 September 2018

12:51 - 12:54  P117  Relationship between sleep structure of patients after ischemic stroke and daily measures
Z. Roštáková (Bratislava, SK)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P118  Soft cervical support in obstructive sleep apnea: a pilot study
P. Bordier (Pessac, Please Select, FR)

12:03 - 12:06  P119  Living obstructive, mixed and central apneas in the same epoch: an interesting OSAS case
S. Yilmaz (Diyarbakir, TR)

12:06 - 12:09  P120  Retinal vascular tortuosity in patients with obstructive sleep apnea-chronic obstructive pulmonary disease overlap syndrome
M. Yousif (Shebin Elkom, EG)

12:09 - 12:12  P121  Associational analysis between sleep-related variables and sleep positional difference of Apnea-Hypopnea Index in obstructive sleep apnea syndrome
D.-H. Park (Seoul, KR)

12:18 - 12:21  P124  Supine and non supine obstructive sleep apnoea syndrome (OSAS): comparison between gender, Body Mass Index (BMI), and OSAS severity
M. Balicaco (Limerick, IE)

12:21 - 12:24  P125  An indigenous device to detect lung and sleep disorders using labview
S. Vijayakumar (Coimbatore, IN)

12:24 - 12:27  P126  Comparing the efficacy of Uvulopalatopharyngoplasty (UPPP) with Modified Radiofrequency Tissue Ablation (MRFTA) in mild to moderate Obstructive Sleep Apnea
S. Rahavi-Ezabadi (Tehran, IR)

12:27 - 12:30  P127  Obesity hypoventilation syndrome and neurocognitive function - impact of positive airway pressure therapy
S. Sivam (Camperdown, NSW, AU)

12:30 - 12:33  P128  Sleep apnea patients with high and low sleepiness response: clinical and polysomnographical differences
W. Moraes (São Paulo, SP, BR)

12:33 - 12:36  P129  Effects of a weight-loss Mediterranean lifestyle intervention on obstructive sleep apnea: preliminary results of a randomized controlled clinical trial
K. Labrou (Athens, GR)
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<tr>
<td>12:36 - 12:39</td>
<td>P130</td>
<td>Associations of obstructive sleep apnea (OSA) and hypoxemia with heart rate variability in a population-based sample of men</td>
<td>S. Appleton (Woodville, SA, AU)</td>
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<td>12:42 - 12:45</td>
<td>P132</td>
<td>The reconstruction of upper airway after velopharyngeal surgery in obstructive sleep apnea patients</td>
<td>J. Ye (Beijing, CN)</td>
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<tr>
<td>12:45 - 12:48</td>
<td>P133</td>
<td>Correlations between sleep parameters and inflammatory and oxidative stress biomarkers in patients with obstructive sleep apnoea</td>
<td>K. Lamprou (Athens, GR)</td>
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<tr>
<td>12:48 - 12:51</td>
<td>P134</td>
<td>Nicotine dependence in patients with Obstructive Sleep Apnea Syndrome</td>
<td>A. Pataka (Thessaloniki, GR)</td>
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<tr>
<td>12:51 - 12:54</td>
<td>P135</td>
<td>High risk and low treatment response in obstructive sleep apnea: a real-world study in office occupational population</td>
<td>Q. Ou (Guangzhou, CN)</td>
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<tr>
<td>12:54 - 12:57</td>
<td>P136</td>
<td>Derived arterial stiffness in OSAS with persistent sleepiness on CPAP and periodic limb movement</td>
<td>E. Dongol (Qena, EG)</td>
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**Poster Session, Poster, Poster Exhibition**

**12:00 - 13:00**

**Breathing disorders 2**

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<tr>
<td>12:00 - 12:03</td>
<td>P137</td>
<td>Fat mass distribution measured by Viscan as a risk factor for Obstructive Sleep Apnea Syndrome</td>
<td>A. Pataka (Thessaloniki, GR)</td>
</tr>
<tr>
<td>12:03 - 12:06</td>
<td>P138</td>
<td>Obstructive sleep apnea as a risk factor of insulin resistance in nondiabetic patients</td>
<td>M. M. Michałek-Zrąbkowska (Wroclaw, PL)</td>
</tr>
<tr>
<td>12:06 - 12:09</td>
<td>P139</td>
<td>Adherence in positive airway pressure in naïve obstructive sleep apnea patients: the importance of the first month of treatment and the impact of telemedicine monitoring</td>
<td>S. Marques (Almada, PT)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>P140</td>
<td>The impact of a telemedicine monitoring on positive airway pressure in naïve obstructive sleep apnea patients' outcomes: a randomized controlled trial</td>
<td>S. Marques (Almada, PT)</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P141</td>
<td>CPAP mask usage time and its effect on air leak</td>
<td>A. Bachour (Helsinki, FI)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P142</td>
<td>Comparing the current classification of obstructive sleep apnea severity with oxygen saturation parameters</td>
<td>S. Wali (Jeddah, SA)</td>
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<td>12:18 - 12:21</td>
<td>P143</td>
<td>Impacts of time of day and seasonal light variation on cognitive performance in patients with suspected Obstructive Sleep Apnea</td>
<td>M. Bowen (Saskatoon, SK, CA)</td>
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<tr>
<td>12:21 - 12:24</td>
<td>P144</td>
<td>Effects of nocturnal ventilatory treatment in cognitive functions in a cohort of patients affected by OHS</td>
<td>M.M.F. Puligheddu (Monserrato, IT)</td>
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<td>12:24 - 12:27</td>
<td>P145</td>
<td>The impact of arousal on sleep-related deglutition in patients with obstructive sleep apnea hypopnea syndrome</td>
<td>Q. Yang (Beijing, Beijing, CN)</td>
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<td>12:27 - 12:30</td>
<td>P146</td>
<td>Non-rapid eye movement oscillatory events in middle-aged and older adults with obstructive sleep apnea</td>
<td>M.-È. Martineau-Dussault (Montreal, QC, CA)</td>
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<td>12:30 - 12:33</td>
<td>P147</td>
<td>The effects of nasal decongestion on obstructive sleep apnea: a detailed analysis</td>
<td>Y. An (Beijing, CN)</td>
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<td>12:33 - 12:36</td>
<td>P148</td>
<td>Association of restless legs syndrome with depression, anxiety, and insomnia in patients with obstructive sleep apnea syndrome</td>
<td>K. Bae (Gwangju, KR)</td>
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<td>12:36 - 12:39</td>
<td>P149</td>
<td>A composite screening method to maximise pick up rate of obstructive sleep apnoe in train drivers</td>
<td>L. Ogunyemi (Nottingham, UK)</td>
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<td>12:39 - 12:42</td>
<td>P150</td>
<td>Association between obstructive sleep apnea hypopnea syndrome and neutrophyl-to-lymphocyte ratio</td>
<td>M. Merino Andreu (Madrid, ES)</td>
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<td>12:42 - 12:45</td>
<td>P151</td>
<td>Effect of obesity on upper airway obstruction during drug-induced sleep endoscopy</td>
<td>H. Kim (Hwaseong, KR)</td>
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<td>12:45 - 12:48</td>
<td>P152</td>
<td>Reliable sleep apnea characterization in adults with suprasternal pressure</td>
<td>T. Penzel (Berlin, DE)</td>
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<td>12:48 - 12:51</td>
<td>P153</td>
<td>Sleep apnea in Tibetans and Han long-term high altitude residents</td>
<td>L. Tan (Chengdu, Sichuan Province, CN)</td>
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<td>12:51 - 12:54</td>
<td>P154</td>
<td>Study on endogenous cannabinoid receptors CB1 of bone metabolism in chronic intermittent hypoxia rat model</td>
<td>W. Bei (Taiyuan, Shanxi, CN)</td>
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12:54 - 12:57  P155  Epworth sleepiness scale and maintenance of wakefulness test in patients with obstructive sleep apnoea
N. Plos (Ljubljana, SI)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  Insomnia 1

Chairs
K. Spiegelhalder (Freiburg, DE)

12:00 - 12:03  P156  Sex-difference in insomnia symptom in a Korean nation-wide population-based sample
Y. La (Seoul, KP)

12:03 - 12:06  P157  The compliances of doxepin for the treatment of insomnia in real world
S.C. Hong (Suwon, KR)

12:06 - 12:09  P158  Clinical trial, using chronobiological sensors, from a chronoregulator and sleep inducer supplement
C. Estivill-Domènech (Barcelona, ES)

12:09 - 12:12  P160  Risk of common cold in patients with nonapnea sleep disorders: a retrospective cohort study
C.-L. Lin (Taoyuan, TW)

12:12 - 12:15  P161  Brain functional MRI (fMRI) study of fragrance inhalation. Any impact on sleep/wake/reward-related brain areas?
G. Badre (Gothenburg, SE)

12:15 - 12:18  P162  A pilot study on a possible impact of aromas on sleep quality in subjects with mild to moderate insomnia
G. Badre (Gothenburg, SE)

12:18 - 12:21  P163  Comparison of lemborexant with zolpidem extended release and placebo: topline results from a phase 3 study in subjects 55 years and older with insomnia
R. Rosenberg (Atlanta, GA, US)

12:21 - 12:24  P164  Activity tracker as a self-help device in insomnia – an intervention study
K.M.H. Tuisku (Helsinki, FI)

12:24 - 12:27  P165  Altered wake resting-state brain activity in insomnia detected with high-density EEG: frequency- and time-domain approaches
Y. Wei (Amsterdam, NL)

12:27 - 12:30  P166  Weekly changes in sleep and insomnia symptoms during acute treatment of persistent insomnia with behavioural or pharmacological therapy
S. Beaulieu-Bonneau (Québec, QC, CA)
Scientific Programme

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12:30 - 12:33  P168  Cognitive and behavioural therapies in the treatment of insomnia: a systematic meta-analysis of all the literature
A. van Straten (Amsterdam, NL)

12:33 - 12:36  P169  Usage transitions between natural products, over-the-counter and prescription sleep aids: a longitudinal cross-lagged analysis
J.M. Cheung (Sydney, NSW, AU)

12:36 - 12:39  P170  Therapist-guided Internet-delivered cognitive behavioral therapy for comorbid insomnia and depression, compared to depression treatment and placebo - a randomized trial
K. Blom (Stockholm, SE)

12:39 - 12:42  P171  Evaluation of functional capacity through the 6-minute Walk Test in adults with insomnia assisted in basic health units - observational study
L.T. Pasqualotto (Divinópolis, Minas Gerais, BR)

12:42 - 12:45  P172  Mismatch between subjective perception and objective findings on sleep time in insomnia patients
K. Bae (Gwangju, KR)

12:45 - 12:48  P173  Associations of heart rate variability with insomnia and the influence of sleep apnea (SA)
R. Adams (Woodville, SA, AU)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

**Insomnia 2**

Chairs
L. Palagini (Pisa, IT)

12:00 - 12:03  P174  The significance of nocturnal blood pressure change in insomnia patients
J.-W. Choi (Seoul, KR)

12:03 - 12:06  P175  Differences exist in metabolic rate in insomnia compared to healthy sleepers: evidence of physiological hyperarousal in insomnia
C. Gordon (Camperdown, AU)

12:06 - 12:09  P176  Acceptability, tolerability, and potential efficacy of cognitive behavioural therapy for Insomnia Disorder subtypes defined by polysomnography: a retrospective cohort study
C. Miller (London, UK)

12:09 - 12:12  P177  Feasibility and preliminary efficacy of brief behavioural treatment for insomnia after brain injury: a case series
M. Gardani (Glasgow, UK)

12:12 - 12:15  P178  Insomnia symptoms predicts peri-partum psychopathology, stress reactivity and suicidality
L. Palagini (Pisa, IT)
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<td>12:15 - 12:18</td>
<td>P179</td>
<td>A systematic review and network meta-analysis of complementary and alternative interventions for insomnia</td>
<td>C. Baglioni (Freiburg, DE)</td>
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<td>12:18 - 12:21</td>
<td>P180</td>
<td>Does preoperative insomnia explain persistent pain after breast cancer treatments?</td>
<td>P. Salo (Turku, FI)</td>
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<td>12:21 - 12:24</td>
<td>P181</td>
<td>First Georgian digital cognitive behavioral therapy (CBT) version for patients with insomnia. Primary data on medical efficacy and adherence</td>
<td>N. Okujava (Tbilisi, GE)</td>
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<td>12:24 - 12:27</td>
<td>P182</td>
<td>Sleep disturbance and the risk for cognitive decline: assessment of visual attention components in patients with insomnia</td>
<td>S. Rupprecht (Jena, DE)</td>
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<td>12:30 - 12:33</td>
<td>P184</td>
<td>Residual symptoms after remission of insomnia: associations with relapse over 4 years</td>
<td>X.W. Ji (Quebec, QC, CA)</td>
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<td>12:36 - 12:39</td>
<td>P186</td>
<td>Associations between rumination about insomnia and cognitive inhibition</td>
<td>A. Ballesio (Rome, IT)</td>
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<td>12:42 - 12:45</td>
<td>P188</td>
<td>Insomnia in the Baependi heart cohort study</td>
<td>S.S. Ahmed (Guildford, UK)</td>
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<td>12:45 - 12:48</td>
<td>P189</td>
<td>Trazodone lowers blood pressure levels in patients with chronic insomnia: a longitudinal, electronic health record study</td>
<td>A. Vgontzas (Hershey, PA, US)</td>
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<td>12:48 - 12:51</td>
<td>P190</td>
<td>Preventing cardiovascular diseases in insomnia patients through CBT-I?</td>
<td>A.F. Johann (Freiburg, DE)</td>
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<td>12:51 - 12:54</td>
<td>P191</td>
<td>Social rhythm regularity moderates the relationship between sleep disruption and depressive symptoms in individuals with post-traumatic stress disorder and major depression</td>
<td>E. Boland (Philadelphia, PA, US)</td>
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**Poster Session, Poster, Poster Exhibition**

**12:00 - 13:00**

**Hypersomnia 1**

**Chairs**

L. Nobili (Milan, IT)

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<td>12:00 - 12:03</td>
<td>P192</td>
<td>Clinical autonomic dysfunctions in narcolepsy type 1: a case-control study</td>
<td>L. Barateau (Montpellier, FR)</td>
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12:03 - 12:06  P193  The story continues: narcoplepsy spectrum occurring several years post ASO3-adjuvanted H1N1 vaccination in young Irish siblings  
D. Ferguson (Dublin, IE)

12:06 - 12:09  P194  Sodium oxybate treatment of narcolepsy in pediatric patients: effects on sleep architecture  
Y. Dauvilliers (Montpellier, FR)

12:09 - 12:12  P195  Upper airway resistance syndrome with a small mandible is not rare among Japanese female  
Y. Fuse-Nagase (Ibaraki, JP)

12:12 - 12:15  P196  Detection of microsleep episodes with machine learning tools  
J. Skorucak (Zurich, CH)

12:15 - 12:18  P197  Solriamfetol (JZP-110) in the treatment of excessive sleepiness in narcolepsy and obstructive sleep apnoea: maintenance of wakefulness test results across the day  
P. Schweitzer (Chesterfield, MO, US)

12:18 - 12:21  P198  A 5-year post-authorization safety study (PASS) relative to Wakix® (pitolisant) use and its long-term safety in narcolepsy with or without cataplexy in routine medical practice  
G. Piazzù (Bologna, IT)

12:21 - 12:24  P199  Effects of solriamfetol on primary OSA therapy use in a 12-week phase 3 trial  
G. Mayer (Schwalmstadt-Treysa, DE)

12:24 - 12:27  P200  Uncontrollable cataplexies: have a look to the cervical spine  
D. Cugy (Bordeaux, FR)

12:27 - 12:30  P201  Test-retest validity of the Epworth Sleepiness Scale within a substantial short time frame  
B. Faludi (Pécs, HU)

12:30 - 12:33  P202  Predictors of daytime sleepiness improvement in a population-based 5-year longitudinal study  
I. Jaussent (Montpellier, FR)

12:33 - 12:36  P203  Quality of life, functional evaluation, and work productivity in patients with narcolepsy: results from a phase 3 study of solriamfetol (JZP-110)  
H. Emsellem (Chevy Chase, MD, US)

12:36 - 12:39  P204  A long-term study of the safety and maintenance of efficacy of solriamfetol (JZP-110) for treatment of excessive sleepiness associated with narcolepsy or obstructive sleep apnoea  
J.L. Pepin (Grenoble, FR)

12:39 - 12:42  P205  Sodium oxybate treatment of narcolepsy in pediatric patients: long-term efficacy and safety  
M. Lecendreux (Paris, FR)
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<td>12:00 - 13:00</td>
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<td><strong>Neurological disorders 1</strong></td>
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<td>Chairs</td>
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<td>C. Nissen (Berne, CH)</td>
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<td>12:00 - 12:03</td>
<td>P206</td>
<td>Polysomnographic evaluation of sleep in Chiari type 1 malformation before surgical decision and after surgery</td>
<td>D. Cugy (Bordeaux, FR)</td>
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<td>12:03 - 12:06</td>
<td>P207</td>
<td>Central sleep apnoeas in a female patient with pharmaco-resistant epilepsy and vagus nerve stimulation</td>
<td>N. Plos (Ljubljana, SI)</td>
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<td>12:06 - 12:09</td>
<td>P208</td>
<td>The association between shift work and migraine, tension-type headache and medication-overuse headache - a cross-sectional study among a large population of nurses</td>
<td>B. Bjorvatn (Bergen, NO)</td>
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<td>12:09 - 12:12</td>
<td>P209</td>
<td>Nocturnal eye movements in patients with idiopathic rapid eye movement sleep behaviour disorder and patients with Parkinson’s disease</td>
<td>J.A.E. Christensen (Glostrup, DK)</td>
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<td>12:12 - 12:15</td>
<td>P210</td>
<td>Apathy and depression in Parkinson’s disease with parasomnias: gender matters</td>
<td>M. Ntafouli (Bern, CH)</td>
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<td>12:15 - 12:18</td>
<td>P211</td>
<td>Cheyne-Stokes respiration and the outcome of acute stroke</td>
<td>S.-Y. Lee (Chuncheon-si,, KR)</td>
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<td>12:18 - 12:21</td>
<td>P212</td>
<td>Clinical utility and diagnostic significance of hepcidin as a biomarker of restless leg syndrome</td>
<td>H.-J. Im (Seoul, KR)</td>
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<td>12:21 - 12:24</td>
<td>P213</td>
<td>Mild motor abnormalities in ‘idiopathic’ REM sleep behavior disorder: a diagnostic window to early neurodegeneration</td>
<td>S. Rupprecht (Jena, DE)</td>
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<td>12:24 - 12:27</td>
<td>P214</td>
<td>Sleep disturbances, fatigue, anxiety and depression in multiple sclerosis (MS): results of the German SLEEP-MS Survey</td>
<td>S. Rupprecht (Jena, DE)</td>
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<td>12:27 - 12:30</td>
<td>P215</td>
<td>Long sleep duration is associated with cognitive decline in patients with multi domain mild cognitive impairment</td>
<td>M. Basta (Voutes-Heraklion, CRETE, GR)</td>
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<td>12:30 - 12:33</td>
<td>P216</td>
<td>Sleep slow waves and spindles in the acute stage of a moderate to severe traumatic brain injury</td>
<td>S. Van der Maren (Montréal, QC, CA)</td>
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<td>12:33 - 12:36</td>
<td>P217</td>
<td>Beyond actigraphy: towards a better understanding of increased sleep duration following traumatic brain injury</td>
<td>H. El-Khatib (Montréal, QC, CA)</td>
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<td>P218</td>
<td>The sleep spindles in the middle cerebral artery acute stroke</td>
<td>J. Isaac (Beja, PT)</td>
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<td>12:39 - 12:42</td>
<td>P219</td>
<td>Alternations of sleep in patients with severe disorders of consciousness</td>
<td>I. Nopper (Tübingen, DE)</td>
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<td>12:42 - 12:45</td>
<td>P220</td>
<td>Circadian distribution of behavioural signs of sleep and wakefulness in patients with disorders of consciousness</td>
<td>Y.G. Pavlov (Tübingen, DE)</td>
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<td>12:48 - 12:51</td>
<td>P222</td>
<td>Prospective, home-based assessment of subjective sleep quality in Parkinson’s disease</td>
<td>P.L. Ratti (Lugano, CH)</td>
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<td>12:00 - 13:00</td>
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<td><strong>Psychiatric &amp; behavioural disorders 1</strong></td>
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<td>12:03 - 12:06</td>
<td>P225</td>
<td>Sleep quality and its association with dysfunctional beliefs and health outcome in a sample of a Nigerian community</td>
<td>C. Seun-Fadipe (Ile-Ife, Osun, NG)</td>
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<td>12:06 - 12:09</td>
<td>P226</td>
<td>Fear of sleep as perpetuating factor of trauma-related sleep disturbances</td>
<td>G. Werner (München, DE)</td>
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<td>12:09 - 12:12</td>
<td>P227</td>
<td>Rapid eye movement sleep abnormalities in female adolescents with borderline personality</td>
<td>A. Saleh (Cairo, EG)</td>
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<td>12:12 - 12:15</td>
<td>P229</td>
<td>An experience sampling study examining the link between sleep and paranoia in patients with non-affective psychosis</td>
<td>A. Rehman (Glasgow, UK)</td>
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<td>12:15 - 12:18</td>
<td>P230</td>
<td>Treating insomnia and depression: using network analysis to explore working mechanisms</td>
<td>T. van der Zweerde (Amsterdam, NL)</td>
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<td>12:18 - 12:21</td>
<td>P232</td>
<td>Sleep problems and daytime sleepiness in adolescents with and without attention-deficit/hyperactivity disorder</td>
<td>S. Becker (Cincinnati, OH, US)</td>
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<td>12:21 - 12:24</td>
<td>P233</td>
<td>The impact of cytokines on sleep and emotional risk improvement in adolescents with an eveningness chronotype</td>
<td>M. Dolsen (Berkeley, CA, US)</td>
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<td>12:24 - 12:27</td>
<td>P234</td>
<td>Transdiagnostic sleep and circadian intervention for youth with eveningness: do pubertal hormones have a moderating effect?</td>
<td>M. Dolsen (Berkeley, CA, US)</td>
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12:27 - 12:30  P235  Proton magnetic resonance spectroscopy of brain in obstructive sleep apnea in Egyptian subjects  
H. Gharraf (Alexandria, EG)

12:30 - 12:33  P236  Sleep deprivation triggers shared temporal dynamics of time and mood perception in bipolar depression  
T. Yoshiike (Milano, IT)

12:33 - 12:36  P237  Athens Insomnia Scale detects depression with moderate accuracy in three Japanese settings  
H. Kadotani (Otsu, Shiga, JP)

12:36 - 12:39  P238  Does sleep moderate the relationship between work-life balance and depression differentially in men and women? Findings from the North West Adelaide Health Study  
A.C. Reynolds (Adelaide, SA, AU)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  Sleep & aging 1

Chairs  
U. Albrecht (Fribourg, CH)

12:00 - 12:03  P239  Sleep loss and circadian phase modulate cortical connectivity but not neuronal complexity in young and older individuals  
G. Gaggioni (Liège, BE)

12:03 - 12:06  P240  Sleep and circadian timing are associated with subjective and objective memory in older adults with subjective memory impairment - evidence for early targeted interventions  
J.E. Manousakis (Melbourne, VIC, AU)

12:06 - 12:09  P242  Postural stability upon being awakened in the middle of the night and in the morning: comparison of lemborexant versus zolpidem extended release  
P. Murphy (Woodcliff Lake, NJ, US)

12:09 - 12:12  P243  Effect of the “humming mask” on sleep perception of healthy elderly  
P.C. Baier (Kiel, DE)

12:12 - 12:15  P244  Younger patients are more obese and have a more severe obstructive sleep apnea syndrome  
S. Mihaicuta (Timisoara, RO)

12:15 - 12:18  P245  Sleep Disorders in an elderly population and their relationship with cognitive symptoms: an epidemiological survey  
M. Maestri (Pisa, IT)

12:18 - 12:21  P246  The effect of retirement on subjective and objective sleep characteristics: the Finnish Retirement and Aging study  
S. Myllyntausta (Turku, FI)
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12:21 - 12:24 P247 Associations of sleep and functioning with the premature exit from the labour market: repeated measures latent class analysis among midlife and ageing public sector employees
T. Lallukka (Helsinki, FI)

12:24 - 12:27 P248 Sleep apnea and hypogonadism in Middle-Aged Men: combined method of treatment
N. Semenova (Irkutsk, RU)

12:27 - 12:30 P249 The effects of APOE genotypes on the longitudinal sleep behavior changes in non-demented general population: the Korean Genome and Epidemiology Study
H.J. Kim (Seoul, KR)

12:30 - 12:33 P250 Impact of age and napping on actimetry-derived sleep and 24-h rest-activity indices
M. Reyt (Liège, BE)

12:33 - 12:36 P251 Sleep, diet and physical activity are associated with inflammation among non-demented community-dwelling elderly
M. Basta (Voutes-Heraklion, CRETE, GR)

12:00 - 13:00 Healthcare services & education

12:00 - 12:03 P252 Sleep disorders among hospital employees
S. Altayyari (Jeddah, SA)

12:03 - 12:06 P253 Sleep quality and quantity in Japanese daytime workers in association with the duration of the daily rest period
H. Ikeda (Kawasaki, JP)

12:06 - 12:09 P254 Effective intervention methods for developing appropriate sleep habits in children
M. Furutani (Kobe, JP)

12:09 - 12:12 P255 Effects of work arrangement on sleep regimen in creative R&D employees
E. Sõõru (Tallinn, EE)

12:12 - 12:15 P256 Daytime sleepiness: impacts of work organisation
E. Sõõru (Tallinn, EE)

12:15 - 12:18 P257 The effect of self-care interventions on sleep quality in post coronary artery bypass graft surgery patients
H. Ghavami (Urmia, IR)
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12:18 - 12:21 P258 Techniques of developing the diagnostic and treatment skills in sleep apnea in students/interns in Pulmonology Clinic Tirgu Mures, Romania
G. Jimborean (Tirgu Mures, Mures, RO)

F. Sun (Guangzhou, CN)

12:24 - 12:27 P260 The impact of rotating work schedules on sleep quality among hospital female nurses and midwives
Y. Nagaura (Ngasaki, JP)

12:27 - 12:30 P261 Primary care treatment of pain-related insomnia: a feasibility study of a hybrid cognitive behavioural therapy approach
N. Tang (Coventry, UK)

12:30 - 12:33 P262 Influence of regular physical exercise on sleep quality and presence of sleep disorders in patients assisted at the Basic Health Units of Divinópolis, Brazil
L.T. Pasqualotto (Divinópolis, Minas Gerais, BR)

12:36 - 12:39 P264 Sleep quality and risk for obstructive sleep apnea in a sample of the Portuguese population
A.M.C.d. Almendra (Braga, PT)

12:39 - 12:42 P265 Sleep study for suspected sleep apnea - are we overtesting?
A.L. Fernandes (Matosinhos, PT)

12:42 - 12:45 P266 A curriculum for a two day PAP, oral appliance and hypoglossal stimulator handling expertise course for nursing staff in geriatric medicine
N. Netzer (Bad Aibling, DE)
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Respiratory Track, Round Table, Montreal

12:15 - 13:15

Pulse wave analysis during sleep - a meaningful tool for improved phenotyping in sleep disorders?

There is an unmet need for improved diagnostic tools in sleep medicine. Outcome variables like health related quality of life or cardiovascular dysfunction are only poorly associated with parameters from traditional sleep assessments including polysomnography or polygraphy. Novel technologies have used analysis of the finger pulse wave during sleep. The signal analysis has several different aspects – recognition of surrogate markers of breathing, arousal from sleep, sleep stages as well as autonomic and cardiovascular function. Currently used technologies include arterial tonometry, pulse transit time calculation, and the computation of variables derived from the pulse wave contour.

One common and important feature is the high availability of the pulse wave signal which can be easily monitored by pulse oximetry. Indeed, the signal is available in the majority of sleep diagnostic devices. However, the information from the pulse wave is not widely used despite in arterial tonometry.

This symposium on pulse wave technology aims to enlighten the basic physiological mechanisms behind the signal as well as the different recording technologies. Further applications of pulse wave analysis in both respiratory and cardiovascular disease may give new insights on physiological and pathophysiological mechanisms during sleep. In addition, new data will be presented from a large cohort of insomnia patients. Erna Sif Arnardottir is the chair of the ESRS task force “Beyond the AHI” and she will bring this new technology into a perspective. Can we use pulse wave analysis during sleep for better phenotyping in patients with sleep disorders?

Chairs

E. Arnardottir (Reykjavik, IS)

12:15 - 12:22  46

Pulse wave analysis during sleep - physiology and methodology

T. Penzel (Berlin, DE)

12:22 - 12:29

Pulse wave analysis during sleep in respiratory disease

H. Schneider (Baltimore, US)

12:29 - 12:36

Pulse wave analysis during sleep in cardiovascular disease

D. Zou (Gothenburg, SE)

12:36 - 12:43  47

Pulse wave analysis during sleep in insomnia

N. Laharnar (Berlin, DE)

12:43 - 13:15

Discussion

Satellite Symposium, Satellite Symposium, Sydney

12:15 - 13:15

Satellite Symposium - Philips - Acoustical enhancement of slow wave sleep

sponsored by Philips
Scientific Programme

Wednesday, 26 September 2018

12:15 - 13:15  Enhancing slow wave sleep
P.C. Zee (Chicago, US)

13:00 - 13:30  Poster Session 1 - Poster viewing


Chairs
L. Nobili (Milan, IT)
C. Bassetti (Berne, CH)

13:30 - 13:54  An animal model of DOA: is it possible?
P.-H. Luppi (Lyon, FR)

13:54 - 14:18  Local aspect of sleep and wakefulness: implications for DOA
F. Siclari (Lausanne, CH)

14:18 - 14:42  Diagnostic criteria for DOA: a video-polysomnographic assessment
R. Lopez (Montpellier, FR)

14:42 - 15:06  Clinical and PSG features distinguishing DOA from Sleep Related
               Hypermotor Epilepsy-SHE
P. Proserpio (Milan, IT)

15:06 - 15:30  Parasomnia overlap disorders
P. Bargiotas (Berne, CH)
Scientific Programme

Wednesday, 26 September 2018

13:30 - 15:30

**Respiratory Track, Symposium, Montreal**

**Asymptomatic sleep disordered breathing: who should be treated?**

It is commonly admitted that sleep disordered breathing associated with symptoms such as daytime sleepiness represents an indication to initiate a treatment. It is however much less clear if and which asymptomatic patients with sleep disordered breathing should be treated, since some of them do not seem to be vulnerable to their disease, while others develop comorbidities such as cerebro/cardiovascular diseases, diabetes, metabolic syndrome and cognitive disorders and depression.

Providing preventive treatment to all asymptomatic patients would be excessively costly and ethically questionable. We thus need to better understand the factors and biomarkers that can predict the risk of negative outcomes in these patients in order to determine who will benefit from a treatment.

**Chairs**
R. Heinzer (Lausanne, CH)
M. Sánchez-de-la-Torre (Lleida, ES)

13:30 - 14:00  51  **Predictors and biomarkers of negative outcomes in obstructive sleep apnea**
R. Heinzer (Lausanne, CH)

14:00 - 14:30  52  **Plasma miRNAs as predictor of CPAP response in resistant hypertension**
M. Sánchez-de-la-Torre (Lleida, ES)

14:30 - 15:00  53  **Breath analysis in OSA patients, new biomarkers?**
M. Kohler (Zurich, CH)

15:00 - 15:30  **Health consequences of untreated central sleep apnea**
W. Randerath (Solingen, DE)
Temporal constraints on sleep and cognition: importance for brain health during ageing

Maintaining temporal coordination of multiple oscillators increases the fitness of an organism and provides it with the most efficient response to the environment. As such, the appropriate temporal framework of sleep and wake states, orchestrated through circadian rhythmicity, putatively represents a key factor modulating an individual’s cognitive ageing trajectory. The temporal organization of sleep and wakefulness evolves throughout lifespan that can break down as the brain ages. Several lines of evidence support a number of relationships between disrupted sleep and/or circadian behaviour and cognitive performance in those with neurodegenerative diseases, but also among healthy subjects. Here we aim at highlighting the importance of sleep and its temporal organization on both healthy and pathological cognitive states during ageing. Dr. C. Reichert (U.Basel) will review age-related changes in circadian sleep-wake regulation and present data indicating a putative protective role of intact circadian sleep-wake regulation for cognition and its cerebral correlates in the aged. Dr. A. Lim (U.Toronto) will present data on the contribution of diurnal rhythms, ranging from epigenetic, transcriptional and fragmented sleep-wake behaviour on healthy and pathological ageing. By using Alzheimer’s disease as a model, Dr. B. Kent (U. British Columbia) will describe data evaluating the specific changes in sleep and circadian rhythms associated with disease in both rodent models and human patients. Finally, Dr. K. Wulff (U. Oxford) will illustrate influences of ageing on visual processes and present behavioural observations and actigraphic data of severely demented residents before and after installation of dynamic LED-based lighting in a care home. Identifying novel factors associated with inter-individual variability in cognitive decline represents a promising area in ageing research. While sleep is increasingly considered as protective for healthy ageing, circadian aspects of the temporal regulation of sleep and wakefulness remain largely unexplored in this branch of research. The proposal integrates novel findings using a variety of techniques and protocols to characterize pathways by which our sleep-wake cycle affects cognition. The topic is of high relevance since both, cognitive decline and inadequately timed sleep, represent dominant determinants of the health span of an ageing population and easy implementable intervention programs are urgently needed.

Chairs
C. Schmidt (Liège, BE)
K. Wulff (Oxford, oxfordshire, UK)

13:30 - 14:00  54
The translational potential of sleep and circadian rhythm disturbances as a biomarker of Alzheimer’s disease
B. Kent (Vancouver, CA)

14:00 - 14:30  55
Brain molecular, histopathological and structural measures linking sleep, circadian rhythms, and dementia in community-dwelling older adults
A. Lim (Toronto, CA)

14:30 - 15:00  56
Age-related changes in circadian sleep-wake regulation: impact on cognitive performance and cerebral correlates
C. Schmidt (Liège, BE)

15:00 - 15:30  57
Dynamic LED lighting: Finding the right light at the right time for severely demented residents
K. Wulff (Oxford, oxfordshire, UK)
Scientific Programme

Wednesday, 26 September 2018

Basic Track, Oral Session, Singapore

13:30 - 14:30 **Electrophysiology of sleep**

**Chairs**
T. DeBoer (Leiden, NL)
G. Zoccoli (Bologna, IT)

13:30 - 13:42 **O058**
Sharpening the paradox of REM sleep: cortical oscillations, synchronization and topographical aspects during phasic and tonic REM microstates
P. Simor (Budapest, HU)

13:42 - 13:54 **O059**
Bidirectional interactions between slow waves and synaptic plasticity
M.C. Kahn (Oxford, UK)

13:54 - 14:06 **O060**
Orexin-independent decreases in sleep propensity mark the onset of spontaneous torpor bouts in calorically-restricted mice
G. Zoccoli (Bologna, IT)

14:06 - 14:18 **O061**
Electrophysiological correlates of sleep and wakefulness in Aplysia californica
A. Vorster (Tübingen, DE)

14:18 - 14:30 **O062**
Intranasal leptin treats sleep disordered breathing in obese mice
V.Y. Polotsky (Baltimore, MD, US)
Scientific Programme

Wednesday, 26 September 2018

13:30 - 15:00

Track Human Sleep, Symposium, Osaka

Sleep problems in early childhood - perspectives into epidemiology and treatment

Circadian rhythm and sleep states evolve rapidly during the first years of life. This development is driven by biological processes, and comprises a complex interplay between genetic characteristics, and environmental and behavioral factors including parental practices, family routines and the developing infant temperament and personality. Poor quality or inadequate quantity of sleep can have a negative impact on daytime functioning and cognitive development. It can also be linked to poorer neuropsychological functioning, behavioral or emotional problems and obesity during the subsequent phases of life. In this symposium comprising researchers from Finland, Italy, UK and Norway, we will present and discuss sleep in infancy and toddlerhood, and methods for their prevention.

Dr Juulia Paavonen (MD PhD, Specialist in Child Psychiatry, National Institute for Health and Welfare, Finland) will present results from a population-based Child-Sleep cohort, Finland, with a focus on prevalence and persistence of sleep disturbances in early childhood, their etiology and association with psychosocial development during the first years of life. Professor Børge Sivertsen (Norwegian Institute of Public Health) will show how sleep problems in infants and toddlers are linked to the development of later emotional and behavioral problems. Professor Oliviero Bruni (Sapienza University of Rome, Italy) will discuss assessment and subtyping of chronic insomnia in childhood. Professor Paul Gringras (Evelina London Children’s Hospital, UK) will present work assessing the effect of pharmacological treatments of children with sleep problems.

Chairs
T. Paunio (Helsinki, Finland, FI)
B. Sivertsen (Bergen, NO)

13:30 - 14:00  63

Disturbed sleep during early infancy: findings from the CHILD-SLEEP cohort
E.J. Paavonen (Helsinki, FI)

14:00 - 14:30  64

Developmental trajectories of sleep problems in toddlers and later emotional and behavioral problems
B. Sivertsen (Bergen, NO)

14:30 - 15:00  65

Clinically oriented subtyping of chronic insomnia of childhood
O. Bruni (Rome, IT)

Track General, ESST Meeting, Rio

13:30 - 15:30

ESST Meeting - Session 3 - Interactive workshops

Chairs
M. Verspaandonk (Tilburg, NL)
Scientific Programme

Wednesday, 26 September 2018

13:30 - 14:30  Workshop: Interactive PSG case studies  
M. van der Mierden (NL)  
H. Steinebach (NL)

14:30 - 15:30  Workshop: Actigraphy  
R. Sharman (Oxford, UK)

Neuropsychiatry Track, Case Discussion, Singapore

14:30 - 15:30  Case discussion: managing sleep problems in psychiatry and psychotherapy

Chairs  
C. Nissen (Berne, CH)

14:30 - 14:50  Always twitchy and tired: differential diagnosis and treatment  
L. Frase (Freiburg, DE)

14:50 - 15:10  Rhythm and mood  
C. Nissen (Berne, CH)

15:10 - 15:30  Still wide awake after cognitive behavioral therapy for insomnia (CBT-I): what next?  
E. Hertenstein (Berne, CH)

Track Translational, Keynote Lecture, San Francisco

16:00 - 16:45  Keynote Lecture - Emmanuel Mignot

Chairs  
L. Nobili (Milan, IT)

16:00 - 16:10  Sleep analytics and biomarkers  
E. Mignot (Palo Alto, US)

Basic Track, Keynote Lecture, Montreal

16:00 - 16:45  Keynote Lecture - Charalambos Kyriacou

Chairs  
C. Cajochen (Basel, CH)

16:00 - 16:45  Molecular analysis of biological clocks: beyond circadian rhythms  
C. Kyriacou (Leicester, UK)
Scientific Programme

Wednesday, 26 September 2018

Respiratory Track, European Network Session, San Francisco

17:00 - 18:30

European Network Session - New insights in the clinical picture of sleep apnea - findings from the European Sleep Apnea Database (ESADA)

Chairs
W. McNicholas (Dublin, IE)

17:00 - 17:20
Introduction: The 10th Anniversary of the ESADA database - lessons learned and visions for the future.
J. Hedner (Gothenburg, SE)

17:20 - 17:40
Clinical Phenotypes of obstructive sleep apnea - a cluster analysis using 'Big data'
S. Bailly (Grenoble, FR)

17:40 - 18:00
Mild sleep apnea - the European perspective
I. Bouloukaki (Heraklion, GR)

18:00 - 18:20
Metabolic consequences of sleep apnea and the impact of treatment
C. Gunduz (Izmir, TR)

Track General, European Network Session, Montreal

17:00 - 18:30

European Network Session - EURLSSG - You

17:00 - 17:10
Welcome and opening
L. Rijksman (The Hague, NL)
B. Högl (Innsbruck, AT)

17:10 - 17:40
PLMS Scoring demystified: a practical guide to the new scoring rules
S. Fulda (Lugano, CH)

17:40 - 17:55
Q&A
S. Fulda (Lugano, CH)

17:55 - 18:20
Discussion
B. Högl (Innsbruck, AT)
L. Rijksman (The Hague, NL)

Track General, European Network Session, Sydney

17:00 - 18:30

European Insomnia Network Session - What's new?

Chairs
D. Riemann (Freiburg, DE)
E. Van Someren (Amsterdam, NL)
### Scientific Programme

**Wednesday, 26 September 2018**

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<th>Session</th>
<th>Speaker/Location</th>
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<tr>
<td>17:00 - 17:20</td>
<td>An introduction to the European guideline for the diagnosis and treatment of insomnia</td>
<td>K. Spiegelhalder (Freiburg, DE)</td>
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<td>17:20 - 17:40</td>
<td>The European Academy for CBT-I - an interim report</td>
<td>C. Baglioni (Freiburg, DE)</td>
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<td>17:40 - 18:00</td>
<td>Ongoing work on insomnia at the SCNI in Oxford</td>
<td>S. Kyle (Oxford, UK)</td>
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<tr>
<td>18:00 - 18:10</td>
<td>Ongoing work on insomnia in Amsterdam</td>
<td>E. Van Someren (Amsterdam, NL)</td>
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<tr>
<td>18:10 - 18:30</td>
<td>Theoretical considerations on the relationships between epigenetics, early trauma, insomnia and depression</td>
<td>L. Palagini (Pisa, IT)</td>
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**Basic Track, Oral Session, Singapore**

**17:00 - 18:30**

**Sleep and cognition**

**Chairs**
- P. Peigneux (Bruxelles, BE)
- S. Schwartz (Geneva, CH)

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>17:00 - 17:12</td>
<td>Selective tracking of relevant speech during human sleep</td>
<td>T. Andrillon (Melbourne, VIC, AU)</td>
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<tr>
<td>17:12 - 17:24</td>
<td>Maintaining vigilance with limited sleep opportunity: is it better to consolidate or split sleep?</td>
<td>M. Chee (Singapore, SG)</td>
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<td>17:24 - 17:36</td>
<td>Effect of total sleep deprivation on the recall of active avoidance response in rats</td>
<td>T. Oniani (Tbilisi, GE)</td>
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<td>17:36 - 17:48</td>
<td>The sleeping brain not only monitors the environment, but also detects relevant information</td>
<td>M. Wislowska (Salzburg, AT)</td>
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<tr>
<td>17:48 - 18:00</td>
<td>Neural correlates of human cognitive abilities during sleep: an EEG-fMRI study</td>
<td>S. Fogel (Ottawa, CA)</td>
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<td>18:00 - 18:12</td>
<td>Effect of interictal epileptic spikes on sleep spindles in medial temporal regions during NREM sleep: are there consequences on memory long-term consolidation? A SEEG study</td>
<td>I. Lambert (Marseille, FR)</td>
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<tr>
<td>18:12 - 18:24</td>
<td>Bad sleepers’ night sleep quality improves after pre-sleep cognitive training</td>
<td>F. Conte (Caserta, IT)</td>
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Wednesday, 26 September 2018

Track General, European Network Session, Osaka

17:00 - 18:30  European Network Session - Narcolepsy

Chairs
C. Bassetti (Berne, CH)
G. Mayer (Schwalmstadt-Treysa, DE)

17:00 - 17:15  EU-NN Data base: Update
R. Khatami (Barmelweid, CH)

17:15 - 17:30  Etiology of human narcolepsy: what is new?
B. Kornum (Copenhagen, DK)

17:30 - 17:45  Treatment of narcolepsy: what is new?
G. Plazzi (Bologna, IT)

17:45 - 18:00  Genetics of familial narcolepsy
M. Tafti (Lausanne, CH)

18:00 - 18:15  Narcolepsy and opiates
R. Fronczek (Leiden, NL)

18:15 - 18:30  EU-NN-EAN-ESRS Narcolepsy guidelines and EU-NN centers of excellence: update
C. Bassetti (Berne, CH)

Track General, ESST Meeting, Rio

17:00 - 17:45  ESST Meeting - Session 4 - The future of sleep technology

Chairs
L. Hill (Edinburgh, UK)

17:00 - 17:30  Future of polysomnography: have we reached a tipping point?
C. Teixeira (Porto, PT)

17:30 - 17:45  The future of the ESST & closing remarks
L. Hill (Edinburgh, UK)

Track General, ESST Meeting, Rio

17:45 - 18:45  ESST Meeting - ESST AGM / National delegates meeting

Satellite Symposium, Satellite Symposium, Montreal

18:40 - 19:40  Satellite Symposium - SomnoMed AG
sponsored by SomnoMed AG
## Scientific Programme

### Wednesday, 26 September 2018

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<th>Time</th>
<th>Event</th>
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<td>18:40 - 19:40</td>
<td>New evidence for Continuous Open Airway Therapy (COAT) in OSA</td>
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<td>J. Bijwadia (Minnesota, US)</td>
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<td>18:40 - 19:40</td>
<td>Satellite Symposium - Toshiba - Sleep and circadian rhythms from the viewpoint of light quality</td>
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<td>sponsored by Toshiba</td>
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<td>Chairs</td>
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<td>C. Cajochen (Basel, CH)</td>
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<tr>
<td>18:40 - 18:52</td>
<td>Effects of light on human sleep, alertness and mental effort</td>
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<td>C. Cajochen (Basel, CH)</td>
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<tr>
<td>18:52 - 19:04</td>
<td>Spectrum as a factor to describe the quality of light</td>
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<td>O. Stefani (Basel, CH)</td>
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<tr>
<td>19:04 - 19:16</td>
<td>The potential of circadian lighting in elderly homes</td>
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<td>M. Münch (Berlin, DE)</td>
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<tr>
<td>19:16 - 19:28</td>
<td>TRI-R LED Spectrum technology designed for circadian rhythm</td>
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<td>K. Kobayashi (JP)</td>
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<tr>
<td>19:28 - 19:40</td>
<td>Q &amp; A</td>
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</table>
Neuropsychiatry Track, Symposium, San Francisco

08:30 - 10:30

REM sleep fragmentation and emotional dysregulation: Evidence for a new mechanism linking sleep and affect?

Recent theories have been proposed that micro- and macro-arousals during REM sleep may be related to emotional dysregulation. The proposed symposium will brief the audience on this theory, and then provide a series of talks presenting new data testing this theory, using insomnia patients across adulthood, adolescence, and middle childhood. First, Dr Wassing (Netherlands) will provide an overview of his psychometric, imaging, EEG and targeted memory reactivation studies to discuss the link between REM sleep and emotional resolution in adult insomnia. Second, Dr Feige (Germany) will present results from a new awakening study focused on specific REM differences in awakening thresholds and sleep perception as well as emotional tone in insomnia. Third, Dr Pesonen (Finland) will provide evidence of a link between micro- and macro-arousals during REM sleep with depression symptoms in adolescents. Finally, Dr Gradisar (Australia) will provide data on whether sleep restriction therapy for insomnia in school-aged children reduces anxiety via REM sleep consolidation. This symposium will be one of the first to assimilate data that provides evidence for a new mechanism linking sleep and emotions.

Chairs
M. Gradisar (Adelaide, AU)
A.-K. Pesonen (Helsinki, FI)

08:30 - 09:00  75

Restless REM sleep impedes overnight emotional resolution in insomnia
R. Wassing (Amsterdam, NL)

09:00 - 09:30  76

Awakening thresholds and (REM) sleep perception in insomnia patients and good sleeper controls
B. Feige (Freiburg, Please choose..., DE)

09:30 - 10:00  77

REM sleep fragmentation and depressive symptoms in late adolescence: evidence from a community cohort
A.-K. Pesonen (Helsinki, FI)

10:00 - 10:30  78

Does school-aged children´s anxiety reduce after sleep restriction therapy via REM sleep consolidation?
M. Gradisar (Adelaide, AU)
Information processing during sleep: recent developments and future perspectives

That sleep plays a role and participates in information processing is now well recognized, but the underlying mechanisms remain disputed. Experimental studies conducted in the past few years provided mounting evidence that a learning experience leads to changes in sleep architecture and related brain activity, reflecting the ongoing processing and restructuring of newly acquired information for its integration into existing networks. Lately, targeted memory reactivation studies have shown that newly acquired information is modulated/enhanced by delivering learning-related cues during post-learning sleep. Furthermore, recent studies evidenced the possibility of in-sleep learning, or the de novo creation of associations during a sleep episode. Notwithstanding, the extent and limits of information processing capabilities during sleep remain to be determined. With this symposium, we are willing to address this timely issue by gathering four speakers who contributed to the recent developments in the field. Capitalizing on the memory reactivation logic, Björn Rasch will discuss recent findings probing whether sleep in itself, and in particular slow wave sleep, can be changed by thoughts, suggestions or reactivations during sleep. Anat Arzi will discuss the interactions between associative learning during sleep and different sleep stages, and the link between slow waves and spindles and sleep stage dependent associative learning. Sid Kouider will discuss how neural activity constrains the ability to process sensory information while asleep, and the formation or suppression of memory traces indicating facilitative and suppressive plasticity during sleep phases. Finally, Philippe Peigneux will discuss new neurophysiological data indicating limitations in the ability to extract complex regularities during sleep, suggesting that in-sleep learning capabilities might restrict to elementary associations, and boundary conditions in the efficiency of target memory reactivation during sleep. Besides presenting latest findings in the research about processing capabilities during sleep, the speakers will also highlight the opportunities and caveats in the development of this field of research.

Chairs
P. Peigneux (Bruxelles, BE)
A. Arzi (Cambridge, UK)

08:30 - 09:00  79  Associative learning during human sleep: an interplay between behavior, sleep stages and brain activity
A. Arzi (Cambridge, UK)

09:00 - 09:30  80  Neural markers of perceptual processing and learning during sleep
S. Kouider (Paris, FR)

09:30 - 10:00  81  The MemoSleep-Hypothesis: how does cognition influence sleep?
B. Rasch (Freiburg, CH)

10:00 - 10:30  81  What can be learned during sleep? Neurophysiological evidence for limitations and boundary conditions
P. Peigneux (Bruxelles, BE)
Recent advances in Fatigue Risk Management: from fatigue countermeasure strategies to sleep science-based policy making

Sleepiness due to sleep loss, circadian misalignment, and/or sleep disorders is common in shift work settings and extended operations. Sleepiness (often called “fatigue” in occupational settings) is a major risk factor for performance impairment, accidents, injury, and chronic health problems. Fatigue risk management is a relatively new field of expertise with a strong basis in sleep research and sleep medicine, aimed at the mitigation of risks associated with sleepiness. Sleep and circadian scientists have made concerted efforts to develop this field, focusing on a number of distinct but interrelated areas:
- fatigue mitigation strategies, ranging from science-based work scheduling practices and improving recovery sleep to planned napping and targeted countermeasure administration;
- sleep disorders screening, diagnosis and treatment programs with high return on investment in occupational settings;
- biomathematical modeling for alertness-friendly work schedule planning, as a fatigue education tool, and as a forensic aid in accident investigation;
- risk-based approaches to safety management and the development of policies and regulations for working time arrangements.

While traditionally seen as a subdiscipline of human factors and organizational psychology, fatigue risk management now has a solid foundation in basic and clinical sleep science. Nevertheless, fatigue risk management has not been featured as a specific symposium topic at the biennial ESRS Congress. The present proposal seeks to fill this gap.

The symposium will start with an introduction into the relevant basic and clinical sleep and circadian science and how it plays out in shift work settings; an example of a company-based sleep disorder screening and treatment program; and a brief overview of biomathematical modeling (Van Dongen, chair). Then there will be presentations on current fatigue risk management strategies in the offshore oil and gas industry (Riethmeister, early career researcher) and in truck drivers and airline pilots (Sallinen). The symposium will conclude with a discussion of how the science is shaping risk-based approaches to policy making and regulations for working time arrangements (Dawson).

Collectively, these presentations form an integrated symposium on recent advances in fatigue risk management that will be of interest to basic, translational and clinical sleep scientists.

Chairs
H. Van Dongen (Spokane, US)
V. Riethmeister (Groningen, NL)

Basic and clinical sleep and circadian science as a foundation for fatigue risk management in occupational settings
H. Van Dongen (Spokane, US)

Fatigue risk management for the offshore oil and gas industry
V. Riethmeister (Groningen, NL)

Alertness management strategies among long-haul truck drivers and airline pilots
M. Sallinen (Helsinki, FI)
Scientific Programme

Thursday, 27 September 2018

10:00 - 10:30  85  Fatigue proofing: the next generation of fatigue risk management
D. Dawson (Wayville, AU)

Respiratory Track, Oral Session, Singapore

08:30 - 10:30  Cardiovascular and other consequences and sleep apnea

Chairs
L. Grote (Gothenburg, SE)
M. Hatzinger (Solothurn, CH)

08:30 - 08:42  O086  Risk factors for increased daytime sleepiness in sleep apnea - results from the National Swedish Sleep Apnea Registry
J. Hedner (Gothenburg, SE)

08:42 - 08:54  O087  Differences in arousal probability and duration after apnea and hypopnea events in adult obstructive sleep apnea patients
T. Leppänen (Kuopio, FI)

08:54 - 09:06  O088  Analysing morphine-induced respiratory depression in obstructive sleep apnoea patients using new technologies: a randomised double-blind placebo-controlled study
D. Wang (Glebe, NSW, AU)

09:06 - 09:18  O089  Long-term mortality depending on severity of sleep apnea in patients after acute myocardial infarction
O. Ludka (Brno, CZ)

09:18 - 09:30  O090  Nonfatal and fatal cardiovascular events in continuous positive airway pressure adherent obstructive sleep apnoea syndrome patients - a retrospective observational study
M. Myllylä (Turku, FI)

09:30 - 09:42  O091  Arrhythmias and sleep related breathing disorders: data from the European Sleep Apnoea Database (ESADA)
C. Lombardi (Milan, IT)

09:42 - 09:54  O092  Associations of heart rate variability and sleep apnea with hypertension
R. Adams (Woodville, SA, AU)

09:54 - 10:06  O093  The predictive value of loop gain measurements in determining continuous positive airway pressure efficacy in patients with obstructive sleep apnea
Y. Li (Beijing, Beijing, CN)

10:06 - 10:18  O094  Psychological distress and depression preceding sleep apnea
P. Salo (Turku, FI)

10:18 - 10:30  O095  Relationship between risk factors for obstructive sleep apnea and cognitive function in middle-aged and older adults: cross-sectional analysis of the Canadian Longitudinal Study on Aging
C. Thompson (Montreal, QC, CA)
Scientific Programme

Thursday, 27 September 2018

08:30 - 10:30  Joint ESRS - EBRS Symposium

Chairs
D. Skene (Guildford Surrey, UK)
H.-P. Landolt (Zurich, CH)

08:30 - 09:00  96  Gene expression changes associated with chronic sleep/wake disorders: insights from Drosophila
L. Seugnet (Lyon, FR)

09:00 - 09:30  Sleep-activity cycles drive global dynamics of protein and phosphorylation in synapses
C. Robles (Munich, DE)

09:30 - 10:00  Human sleep and circadian metabolomics studies
D. Skene (Guildford Surrey, UK)

10:00 - 10:30  A search for glymphatic like mechanisms in healthy human sleep
S. Holst (Copenhagen, DK)

11:00 - 12:00  Restless legs syndrome and dementia

Chairs
B. Högl (Innsbruck, AT)
F. Provini (Bologna, IT)

11:00 - 11:12  O097  Non-dipping pattern in restless legs syndrome
S. Chenini (Montpellier, FR)

11:12 - 11:24  O098  Stroke-related restless legs syndrome: an anatomo-clinical entity with clues to pathophysiology
E. Ruppert (Strasbourg, FR)

11:24 - 11:36  O099  Sleep-wake fragmentation is linked to amyloid beta brain deposition in healthy ageing
J. Narbutas (Liège, BE)

11:36 - 11:48  O100  EEG functional connectivity during REM sleep: a marker of cognitive status?
A. Lafrenière (Montréal, QC, CA)

11:48 - 12:00  O101  Serotone melatonin timing secretion in real life conditions in Alzheimer patients of mild to moderate severity
R. Manni (Pavia, IT)
Scientific Programme

Thursday, 27 September 2018

11:00 - 12:00

**Case discussion - Central hypersomnia-circadian disorders**

**Chairs**

P. Jennum (Glostrup, DK)

11:00 - 11:20

**Narcolepsy versus idiopathic hypersomnia**

Y. Dauvilliers (Montpellier, FR)

11:20 - 11:40

**Secondary narcolepsy**

G. Plazzi (Bologna, IT)

11:40 - 12:00

**Comorbid narcolepsy - psychiatric implications**

P. Jennum (Glostrup, DK)
Rhythms of (un)healthy sleep: understanding and modulation of multi-system oscillations

Several sleep phenomena, such as the electroencephalographic power spectrum, the occurrence of arousals, limb movements (LM), epileptic discharges, and apneas, have a loosely periodic structure and tend to synchronize together. Oscillations of the autonomic nervous system usually accompany such phenomena acting as a supporting and possibly necessary background. As a result, these multi-system oscillations impact on heart rate and arterial blood pressure, with a potential role as a risk factor for cardiovascular disease.

In the near future, it will be highly relevant to address two crucial questions: 1) which is the pathological role of these oscillating phenomena? 2) Given the synchronization among systems, how can we decide which should be the right therapeutic target to control? The answers to these questions should take into account the possible dual role of these multi-system oscillations, which may be pathological or physiological depending on their features, such as amplitude, frequency, and clinical context.

As a practical example, patients with respiratory-related LM during sleep may not show a decrease in LM occurrence after treatment of sleep apneas. Similarly, pharmacological treatment of periodic LM during sleep may not improve daytime somnolence and insomnia. On the other hand, periodic central breathing patterns may unexpectedly improve with sleep stabilizers like benzodiazepines.

These examples highlight that while behavioral, motor, respiratory, and autonomic oscillations during sleep have been well described, the understanding of their interactions is lagging behind. This delay arises, at least in part, from limited attempts to translate knowledge between patients and animal models for deeper mechanistic insight, and from limited data obtained with interventional approaches.

Recent technical advancements, including miniature wearable/implantable devices and the development of network physiology, now facilitate the recording and analysis of multiple polysomnographic signals in clinical populations and in small laboratory animals. It is thus timely to bring together basic and clinical sleep scientists to take stock of different facets of multi-system oscillations during sleep, and delineate a research agenda for understanding their interactions and clinical implications. This symposium proposal aims to take this challenge attracting a wide range of delegates (basic human/basic animal sleep scientists, neurologists, pneumologists, cardiologists).

Chairs
G. Lavigne (Montreal, CA)
R. Ferri (Troina, IT)

EEG correlates of multi-system oscillations: from visual identification to the analysis of complexity
R. Ferri (Troina, IT)

Autonomic background of multi-system oscillations: from humans to model organisms
A. Silvani (Bologna, IT)

The interplay between periodic leg movements, arousals and breathing events
M. Manconi (Lugano, CH)
Scientific Programme

Thursday, 27 September 2018

12:30 - 13:00  104  The interplay between sleep bruxism, arousals and breathing or period movement related events
G. Lavigne (Montreal, CA)

11:00 - 12:30  ANSS Networking Meeting

11:00 - 11:10  The European situation and the main difficulties among the different national sleep societies
L. Parrino (Parma, IT)

11:10 - 11:20  A brief story of the ANSS activities in the last 4 years
J. Verbraecken (Antwerp, BE)

11:20 - 11:30  The Beyond AHI Task Force: an update
E. Arnardottir (Reykjavik, IS)

11:30 - 11:40  Open challenges and future perspectives for the ANSS
B. Strazisar (Ljubljana, SL)

11:40 - 11:50  Panel Discussion
L. Parrino (Parma, IT)
J. Verbraecken (Antwerp, BE)
E. Arnardottir (Reykjavik, IS)
B. Strazisar (Ljubljana, SL)
O.C. Deleanu (Bucuresti, RO)
S. Khachatryan (Yerevan, AM)
L. Korostovtseva (St Petersburg, RU)
Y. van der Werf (Amsterdam, NL)

11:00 - 12:00  Poster Session, Poster, Poster Exhibition

11:00 - 12:00  Poster Session 2 - Poster viewing

12:00 - 13:00  Parasomnias

Chairs
Y. Dauvilliers (Montpellier, FR)
F. Siclari (Lausanne, CH)

12:00 - 12:12  O105  Negative stress coping is associated with structural integrity of posterior cingulate cortex in sleep walking
M. Ramm (Münster, DE)
**Scientific Programme**

**Thursday, 27 September 2018**

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<tr>
<td>12:12 - 12:24</td>
<td>O106</td>
<td>Topographical spectral power changes associated with NREM parasomnia episodes - a high-density EEG study</td>
<td>J. Cataldi (Lausanne, CH)</td>
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<tr>
<td>12:24 - 12:36</td>
<td>O107</td>
<td>Regional patterns of neuronal activity in REM sleep behavior disorder using high-density EEG</td>
<td>A. Valomon (Madison, WI, US)</td>
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<td>12:36 - 12:48</td>
<td>O108</td>
<td>Actigraphic differences in the rapid eye movement sleep behavior disorder patients</td>
<td>D. Kemlink (Praha, CZ)</td>
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<tr>
<td>12:48 - 13:00</td>
<td>O109</td>
<td>Efficacy of prolonged release melatonin for REM sleep behaviour disorder in Parkinson's disease: a double blind, randomised, placebo-controlled trial</td>
<td>N. Marshall (Camperdown, AU)</td>
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Track Human Sleep, Case Discussion, Montreal

**Case Discussion**

**Chairs**

L. Nobili (Milan, IT)

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<tr>
<td>12:00 - 12:20</td>
<td></td>
<td>Central hypersomnias: A pediatric KLS case after 2009 H1N1 vaccine</td>
<td>M. Lecendreux (Paris, FR)</td>
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<tr>
<td>12:20 - 12:40</td>
<td></td>
<td>Gait Disturbance as first sign of early onset narcolepsy</td>
<td>F. Pizza (Bologna, IT)</td>
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<td>12:40 - 13:00</td>
<td></td>
<td>A case of paroxysmal nocturnal events associated with choking</td>
<td>L. Nobili (Milan, IT)</td>
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Poster Session, Poster, Poster Exhibition

**Biochemistry & neurobiology 1**

**Chairs**

P.-H. Luppi (Lyon, FR)

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>12:00 - 12:03</td>
<td></td>
<td>Dynamic metabolic changes in the waking and sleeping brain - insights from MR spectroscopy</td>
<td>M. Lehmann (Zurich, CH)</td>
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<tr>
<td>12:03 - 12:06</td>
<td></td>
<td>Randomized, single dose, double-blind, 4-way crossover study determining the abuse potential of pitolisant compared to phentermine and placebo, in healthy, non-dependent recreational stimulant users</td>
<td>C. Scart-Grès (Paris, FR)</td>
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<td>Time</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P283</td>
<td>Olanzapine influence on brain activity shown in standardized low</td>
<td>Y. Abshir Ahmed (München, Bayern, DE)</td>
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<td>resolution brain electromagnetic tomography and heart rate variability</td>
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<td>during sleep in healthy subjects</td>
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<td>12:09 - 12:12</td>
<td>P284</td>
<td>Relationship between early and late components of the evoked response</td>
<td>E. Krugliakova (Zürich, CH)</td>
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<td>to two different auditory stimuli applied during slow wave sleep by</td>
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<td>means of closed-loop technique</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P285</td>
<td>Differential regulation of theta and fast-gamma oscillations in the</td>
<td>A. Vassalli (Lausanne, CH)</td>
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<td>waking state of mice disrupted in Hypocretin/Orexin Receptor-1, or</td>
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<td>2 selectively in noradrenergic, or dopaminergic neurons</td>
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<td>12:15 - 12:18</td>
<td>P286</td>
<td>Homer1a upregulation in the claustrum, a neuronal super-hub, may</td>
<td>N. Naidoo (Philadelphia, PA, US)</td>
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<td>influence sleep/wake behavior</td>
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<td>study in younger and older adults</td>
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<td>12:21 - 12:24</td>
<td>P288</td>
<td>Effects of habenular stimulation frequencies on obstructive sleep</td>
<td>M. Li (Changchun, CN)</td>
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<td>apnea induced by stimulation of insular cortex</td>
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<td>12:24 - 12:27</td>
<td>P289</td>
<td>Scale invariance attenuation and altered sleep parameters following</td>
<td>T. DeBoer (Leiden, NL)</td>
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<td>increasing dim-light-at-night duration periods</td>
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<td>12:27 - 12:30</td>
<td>P290</td>
<td>Individual waking alpha EEG power correlates negatively with</td>
<td>D. Elmenhorst (Jülich, DE)</td>
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<td>adenosine receptor density measured with PET</td>
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<td>12:30 - 12:33</td>
<td>P291</td>
<td>Ambient temperature warming and the role of the lateral hypothalamus</td>
<td>M. Schmidt (Berne, CH)</td>
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<td>in REM sleep expression</td>
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<tr>
<td>12:33 - 12:36</td>
<td>P292</td>
<td>Caring for those with brain injury: investigating sleep disturbances</td>
<td>M. Gardani (Glasgow, UK)</td>
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<td></td>
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<td>and fatigue</td>
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<tr>
<td>12:36 - 12:39</td>
<td>P293</td>
<td>Habitual daily caffeine consumption and its cessation changes</td>
<td>Y.-S. Lin (Basel, CH)</td>
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<td>human grey matter density independent from the effect of cerebral</td>
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<td>blood flow: a multimodal study</td>
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12:00 - 13:00

Poster Session, Poster, Poster Exhibition

Sleep physiology 2

Chairs
G. Zoccoli (Bologna, IT)

12:00 - 12:03  P294  Measures of interoception during changes in conscious state from wakefulness to sleep and their potential significance for altered awareness in psychiatric conditions
J. Lechinger (Kiel, DE)

12:03 - 12:06  P295  Genetic contribution to slow wave energy in adolescents
A. Markovic (Bern, CH)

12:06 - 12:09  P296  Slow-wave enhancement reduces trauma-induced APP overexpression in novel mouse model of traumatic brain injury compatible with EEG/EMG headset
M.M. Morawska (Zurich, CH)

12:09 - 12:12  P297  The 0.02 Hz-oscillation in sigma power times spontaneous transitions from non-REM sleep
R. Cardis (Lausanne, CH)

12:12 - 12:15  P298  Sleep under cold pressure: rats vs hamsters
O. Shylo (Kharkiv, UA)

12:15 - 12:18  P299  Sigma power topography maturation across the first two decades of life
S. Kurth (Zurich, CH)

12:18 - 12:21  P300  Cortical perturbations reveal local sleep-like down states in cortical perilesional area
S. D’Ambrosio (Milan, IT)

12:21 - 12:24  P301  Peripheral sympathetic activations underlying PWA drops induce significant changes in EEG activity in a sleep-stage-specific manner
M. Betta (Lucca, Lucca, IT)

12:24 - 12:27  P302  Sleep orchestrates input-specific plasticity and global stability of neural assemblies in the human cortex
J.G. Maier (Bern, CH)

12:27 - 12:30  P303  Bidirectional and context-dependent changes in theta and gamma oscillatory brain activity in noradrenergic cell-specific Hcrt1 KO mice
S. Li (Lausanne, CH)

12:30 - 12:33  P304  Is the sleep structure vulnerable to microbiological indoor air contaminants?
M. Meira e Cruz (Lisboa, PT)

12:33 - 12:36  P305  Sleep quality and daytime sleepiness among primary care physicians
A. Wichniak (Warsaw, PL)
Scientific Programme

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12:36 - 12:39 P306 Night-shift work and work hours among primary care physicians - consequences for sleep quality, body weight and risk of primary sleep disorders
K. Gustavsson (Warszawa, Mazowieckie, PL)

12:39 - 12:42 P307 A case study: increased spectral power and correlations of multimodal neuroimaging data during N1 sleep as a link to glymphatic mechanism
H. Helakari (Oulu, FI)

12:42 - 12:45 P308 Nonparametric approach for sleep stage classification using cardiorespiratory and movement features
S. Kumar (Zurich, CH)

Poster Session, Poster, Poster Exhibition
12:00 - 13:00 Chronobiology 2

Chairs
G. Vandewalle (Liege, BE)

12:00 - 12:03 P310 Does Light with variation in spectrum and intensity during night shift prevent delay of circadian rhythm and sleepiness?
S. Higuchi (Fukuoka, JP)

12:03 - 12:06 P311 Larks, owls, swifts and woodcocks among fruit flies: maladaptive responses of the sleep-wake cycle to hot and/or long summer days are modified by heritable chronotype
A. Putilov (Novosibirak, RU)

12:06 - 12:09 P312 Sleep homeostasis during daytime food entrainment in mice
R.C. Northeast (Oxford, County (optional), UK)

12:09 - 12:12 P313 Melatonin circadian rhythms in menopausal women with insomnia: ethnic aspect
N. Semenova (Irkutsk, RU)

12:12 - 12:15 P314 Evening and bedtime use of electronical devices and its effects on subjective sleep characteristics. Are blue light filters effective?
M. Šmotek (Klecan, CZ)

12:15 - 12:18 P315 Effects of lighting with continuously changing color temperature and illuminance on subjective sleepiness and melatonin profiles
O. Stefani (Basel, CH)

12:18 - 12:21 P316 The impact of shift-work on human energy intake: a systematic review
E. Cayanan (Camperdown, NSW, AU)

12:21 - 12:24 P317 The effects of a split-sleep schedule on vigilance and sleep in nurses working night shifts
T. Weysen (Eindhoven, NL)
Scientific Programme

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12:24 - 12:27  P318  Interaction of chronotype subscales and their association with single nucleotide polymorphisms in shift-working drivers  
A. Puchkova (Moscow, Russia, RU)

12:27 - 12:30  P319  No circadian activity rhythm in single-handed racing sailors  
R.V. Rial (Palma de Mallorca, ES)

12:30 - 12:33  P320  Effects of short exposure to different light illuminance in regular rest breaks on melatonin suppression and sleepiness during simulated night work  
S.-I. Lee (Sapporo, JP)

12:33 - 12:36  P321  Social jetlag in Chinese assessed with wearable devices  
Z. Zhang (Barmelweid, CH)

12:36 - 12:39  P322  Is sleepiness in shift work different according to work schedule?  
S.D.B. Garnier (Quebec, QC, CA)

12:39 - 12:42  P323  The relationship between vitamin D deficiency and daytime sleepiness in workers of a general hospital  
H.J. Lee (Seongnam-si, KR)

12:42 - 12:45  P324  Pilot study to investigate sleep disorders in blind and severe visual impairment  
C. Dirks (Muenster, DE)

12:45 - 12:48  P325  Daytime siesta is associated with increased HbA1c community cross-sectional study  
M. Al-Abri (Muscat, OM)

12:48 - 12:51  P326  Variability of total sleep time in patients with delayed sleep-wake phase disorder  
T. Kitajima (Toyoake, Aichi, JP)

12:51 - 12:54  P327  Sleep coaching in a population-based RCT improves adolescent sleep  
A.-K. Pesonen (Helsinki, FI)

12:54 - 12:57  P328  Tasimelteon for jet lag disorder: results of the JET8 study, a randomized placebo controlled phase 3 trial  
J. Brzezynski (Washington, DC, US)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P329  Quantifying the risk of poor sleep outcomes for high and very high adolescent social media users: findings from the nationally representative UK Millennium Cohort Study  
H. Scott (Glasgow, UK)
## Scientific Programme

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<tr>
<td>12:03 - 12:06</td>
<td>P330</td>
<td>Effects of bright light on sleepiness and cognitive performance during simulated night shift work</td>
<td>J. Mrdalj (Bergen, NO)</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P331</td>
<td>Daytime sleep following bright light exposure during simulated night shifts</td>
<td>J. Mrdalj (Bergen, NO)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P332</td>
<td>Social media use and sleep in adults: a vulnerability perspective</td>
<td>H. Scott (Glasgow, UK)</td>
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<td>12:12 - 12:15</td>
<td>P333</td>
<td>Bedtime and behavioral problems in Finnish students</td>
<td>L. Kortesoja (Helsinki, FI)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P334</td>
<td>The pleasure of sleeping</td>
<td>R.V. Rial (Palma de Mallorca, ES)</td>
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<tr>
<td>12:18 - 12:21</td>
<td>P335</td>
<td>No effect by daily coffee consumption on the association between a common gene variant of the melatonin receptor 1B and fasting blood glucose</td>
<td>X. Tan (Uppsala, SE)</td>
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<td>12:21 - 12:24</td>
<td>P336</td>
<td>Which characteristics predict the preference for later school start times in Zurich adolescents?</td>
<td>H. Werner (Zurich, CH)</td>
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<td>12:24 - 12:27</td>
<td>P337</td>
<td>Young children’s sleep and maternal sleep-related cognitions: a comparison between three different Arab societies in Israel</td>
<td>I. Haimov (Nazareth, IL)</td>
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<td>12:27 - 12:30</td>
<td>P338</td>
<td>Equality of sleep disturbances in parents is associated with reduced stress</td>
<td>G. Hardelin (Stockholm, SE)</td>
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<td>12:30 - 12:33</td>
<td>P339</td>
<td>Romantic love - another reason to sleep less during adolescence</td>
<td>L. Kuula (Helsinki, FI)</td>
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<tr>
<td>12:33 - 12:36</td>
<td>P340</td>
<td>To snooze or not to snooze: effects of intermittent morning awakenings 30 minutes before final awakening.</td>
<td>T. Sundelin (Stockholm, SE)</td>
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<td>12:36 - 12:39</td>
<td>P341</td>
<td>Sleep complaints and well-being in shiftworkers of different occupational groups</td>
<td>I. Hrytsyuk (Kiev, UA)</td>
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<td>12:39 - 12:42</td>
<td>P342</td>
<td>Reactivation of hypothalamic inhibitory neurons during REM sleep maintains appetite</td>
<td>L. Oesch (Bern, CH)</td>
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<td>12:42 - 12:45</td>
<td>P343</td>
<td>Benefits of a short afternoon nap: Investigating the parallel effects on physiological arousal and cognitive performance</td>
<td>T. Ru (Guangzhou, Guangdong, CN)</td>
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<td>12:45 - 12:48</td>
<td>P344</td>
<td>Glucose tolerance following a 6-week sleep extension protocol in overweight short sleepers</td>
<td>I. Hartescu (Loughborough, UK)</td>
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<td>12:48 - 12:51</td>
<td>P345</td>
<td>Is it possible to adjust the driving and resting times when operating highly autonomous trucks?</td>
<td>C. Ahlström (Linköping, SE)</td>
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<td>12:51 - 12:54</td>
<td>P346</td>
<td>Excessive daytime sleepiness and traffic accidents among taxi drivers: a cross-sectional survey in İzmit</td>
<td>Ç. Çaglayan (Kocaeli, TR)</td>
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**Poster Session, Poster, Poster Exhibition**

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<td>12:00 - 13:00</td>
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<td>Learning, memory &amp; cognition 2</td>
<td>K. Porcheret (Oxford, UK)</td>
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<tr>
<td>12:00 - 12:03</td>
<td>P347</td>
<td>Neural correlates of autobiographical memory and self in patients of stroke and head injury</td>
<td>P. Taylor (Bangalore, Karnataka, IN)</td>
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<tr>
<td>12:03 - 12:06</td>
<td>P348</td>
<td>Sleeping after an emotional event leads to long-term decreases in visceral and subjective emotional responses associated with memory</td>
<td>E. Bolinger (Tübingen, DE)</td>
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<td>12:06 - 12:09</td>
<td>P349</td>
<td>A daytime nap facilitates the consolidation of and modulates the autonomic response to emotional memories</td>
<td>N. Cellini (Padova, IT)</td>
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<td>12:09 - 12:12</td>
<td>P350</td>
<td>Assessing the sequential hypothesis for memory consolidation in narcoleptic patients</td>
<td>M. Strauss (Gif/Yvette, FR)</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P351</td>
<td>Lack of frequency-tagged magnetic responses suggests statistical regularities remain undetected during NREM sleep</td>
<td>P. Peigneux (Bruxelles, BE)</td>
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<td>12:15 - 12:18</td>
<td>P352</td>
<td>Perinatal memory and the influence of prenatal stimulation on newborns sleep</td>
<td>A. Lang (Salzburg, AT)</td>
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<td>12:18 - 12:21</td>
<td>P353</td>
<td>Brain connectivity during the consolidation of procedural learning in quiet rest versus sleep</td>
<td>Z. Zavecz (Budapest, HU)</td>
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<td>12:21 - 12:24</td>
<td>P354</td>
<td>Reinstatement of emotional associations during human sleep: an intracranial EEG study</td>
<td>G. Legendre (Genève, CH)</td>
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12:24 - 12:27  P355  Pre-attentive auditory perception during slow-wave sleep: a study of event-related potentials in response to violation of global and local regularity in the sound sequence
K. Liaukovich (Moscow, RU)

12:27 - 12:30  P356  The impact of sleep on complex gross-motor adaptation in adolescents
K. Bothe (Salzburg, Salzburg, AT)

12:30 - 12:33  P357  Does sleep benefit prospective intention realization: comparing valence and neutral cues
N. Kashyap (Guwahati, IN)

12:33 - 12:36  P358  Well done! Effects of post-learning positive reinforcement on motor memory recall performance 12 hours and 1 month after learning
F. Rångtell (Uppsala, SE)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P359  The effect of sleep deprivation on recognition of ambiguous emotional facial expressions in individuals with ADHD
O. Dan (Shimshit, IL)

12:03 - 12:06  P360  The sleepiness curve of young men with and without Attention Deficit Hyperactivity Disorder (ADHD)
A. Cohen (Yezreel Valley, IL)

12:06 - 12:09  P361  The effect of short sleep on lipid metabolism in Japanese university students
S. Miyata (Nagoya, JP)

12:09 - 12:12  P362  Homeostatic response to sleep restriction in adolescents
J. Skorucak (Zurich, CH)

12:12 - 12:15  P363  Intrinsic nonlinearity of psychomotor vigilance test metrics as a function of hours awake during sleep deprivation
S. Riedy (Spokane, WA, US)

12:15 - 12:18  P365  Cognitive performance and self-reported sleepiness are modulated by time-of-day during a mountain ultramarathon
R. Hurdiel (Dunkerque, FR)

12:18 - 12:21  P366  Chronic sleep restriction only reduces performance when it accrues rapidly
T.L. Signal (Wellington, NZ)
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<tr>
<td>12:21 - 12:24</td>
<td>P367</td>
<td>The alerting effects during the wake maintenance zone vary with prior duration of wakefulness</td>
<td>J. de Zeeuw (Berlin, DE)</td>
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<tr>
<td>12:24 - 12:27</td>
<td>P368</td>
<td>Effect of a single night of total sleep deprivation and a night of recovery sleep on plasma melatonin and cortisol profiles and the metabolome</td>
<td>A. Homma ( Guildford, UK)</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P369</td>
<td>Sleep deprivation alters affective and neural responses to erotic stimuli in heterosexual males</td>
<td>L. Riontino (Genève, CH)</td>
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<tr>
<td>12:30 - 12:33</td>
<td>P370</td>
<td>Work organization reduces sleep quality among airline pilots</td>
<td>C. Moreno (Sao Paulo, BR)</td>
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<tr>
<td>12:33 - 12:36</td>
<td>P371</td>
<td>Decreased inhibitory control after partial sleep deprivation in individuals reporting binge eating</td>
<td>A. Ballesio (Rome, IT)</td>
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<tr>
<td>12:36 - 12:39</td>
<td>P372</td>
<td>State anxiety over 62 hours of sleep deprivation and recovery</td>
<td>T.J. Doty (Silver Spring, MD, US)</td>
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<tr>
<td>12:39 - 12:42</td>
<td>P373</td>
<td>Specified brain states determined by dynamic functional connectivity occur with higher frequencies after 52h sleep deprivation compared to recovery</td>
<td>C. Li (Jülich, DE)</td>
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**Poster Session, Poster, Poster Exhibition**

### 12:00 - 13:00

**Methodology & computation 2**

**Chairs**

G. Hammad (Liège, BE)

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<tr>
<td>12:00 - 12:03</td>
<td>P374</td>
<td>Comparison between the use of APAP and manual titration during split night polysomnography for diagnosis and treatment of OSA</td>
<td>H. Gharraf (Alexandria, EG)</td>
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<tr>
<td>12:03 - 12:06</td>
<td>P375</td>
<td>OUTCOMES OF TORS AS PART OF MULTILEVEL SURGERY IN SELECT OSA PATIENTS</td>
<td>K. Nagpal (New Delhi, IN)</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P376</td>
<td>Agreement of mobile app with SleepSense and polysomnography in patients with sleep-disordered breathing</td>
<td>P. Song (Gyeonggi-do, KR)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>P377</td>
<td>Methods for detecting abnormal ventilation in children with snoring and with different genetic features</td>
<td>P. Nokelainen (Tampere, FI)</td>
</tr>
<tr>
<td>12:12 - 12:15</td>
<td>P378</td>
<td>Evaluation of home polysomnography for making a sleep diagnosis</td>
<td>L. Rohling (Zwolle, Overijssel, NL)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P379</td>
<td>A novel home-based strategy for obstructive sleep apnoea detection in paediatrics</td>
<td>C.A. Macleod (Glasgow, Lanarkshire, UK)</td>
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<tr>
<td>12:18 - 12:21</td>
<td>P380</td>
<td>Psychometric properties of the Chinese Epworth Sleepiness Scale among individuals with depressive symptoms: a confirmatory factor analysis</td>
<td>Y.C. Lam (Hong Kong, HK)</td>
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<tr>
<td>12:21 - 12:24</td>
<td>P381</td>
<td>Impact of weak extremely low frequency pulsed electromagnetic field on subjective assessment of sleep quality</td>
<td>I. Blokhin (Moscow, RU)</td>
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<tr>
<td>12:24 - 12:27</td>
<td>P382</td>
<td>Inter- and intra-expert variability in sleep scoring: comparison between visual and automatic analysis</td>
<td>V. Muto (Liège, BE)</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P383</td>
<td>Guidelines for the application of the objective sleepiness scale for drowsiness assessment</td>
<td>J. Taillard (Bordeaux, FR)</td>
</tr>
<tr>
<td>12:30 - 12:33</td>
<td>P384</td>
<td>High-throughput sleep phenotyping establishes heritability and identifies a novel linkage peak in diversity outbred mice</td>
<td>B. Keenan (Philadelphia, PA, US)</td>
</tr>
<tr>
<td>12:33 - 12:36</td>
<td>P385</td>
<td>Pilot assessments of mobile and automated sleep recording and auditory slow-wave stimulation for in-home studies</td>
<td>C. Lustenberger (Zurich, CH)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P386</td>
<td>Dissecting local sleep spindles in the thalamocortical system</td>
<td>M. Bandarabadi (Bern, CH)</td>
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<tr>
<td>12:39 - 12:42</td>
<td>P387</td>
<td>Heart rate variability-based sleep staging in healthy subjects and patients with sleep disorders</td>
<td>P. Fonseca (Eindhoven, NL)</td>
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<tr>
<td>12:42 - 12:45</td>
<td>P388</td>
<td>Development of predictive models of obstructive sleep apnea by using decision tree</td>
<td>M. Amini ( Mashhad, IR)</td>
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<tr>
<td>12:45 - 12:48</td>
<td>P389</td>
<td>Developing minimum data set for information management systems of obstructive sleep apnea</td>
<td>M. Amini ( Mashhad, IR)</td>
</tr>
<tr>
<td>12:48 - 12:51</td>
<td>P390</td>
<td>Extracting association rules from polysomnographic data of obstructive sleep apnea subjects</td>
<td>M. Amini ( Mashhad, IR)</td>
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Scientific Programme

Thursday, 27 September 2018

12:00 - 13:00  
**Breathing disorders 3**

**Chairs**  
O. Polo (Tampere, FI)

12:00 - 12:03  P391  
The predictive risk factors of cardiovascular events in patients with obstructive sleep aponea and hypopnea syndrome  
R. Chen (Suzhou, CN)

12:03 - 12:06  P392  
Estimation of obstructive sleep apnea severity using additive Bayesian networks  
A. Bostancı (Antalya, TR)

12:06 - 12:09  P393  
The effectiveness of remote monitoring in improving CPAP compliance: a randomised, controlled study  
S. van der Kleij (Breda, NL)

12:09 - 12:12  P394  
Home sleep apnea testing with Polywatch® - comparison with polysomnography  
M. Ferreira (Coimbra, PT)

12:12 - 12:15  P396  
Effect of gender on obstructive sleep apnea severity change according to age-group  
Y.-Y. Shin (Seoul, KR)

12:15 - 12:18  P397  
Distinct EEG-EMG-coherence patterns associated with sleep-disordered breathing severity grade  
H. Gouveris (Mainz, DE)

12:18 - 12:21  P398  
Imaging of obstructive sleep apnoea anatomic risk factors after bariatric surgery weight loss: a pilot study  
K. Sutherland (Sydney, NSW, AU)

12:21 - 12:24  P399  
Craniofacial photography for assessment of obstructive sleep apnoea risk in an Icelandic general population sample  
K. Sutherland (Sydney, NSW, AU)

12:24 - 12:27  P400  
Sleepiness, fatigue, anxiety and depression in overlap syndrome  
N.-T. Economou (Athens, GR)

12:27 - 12:30  P401  
Investigation of the relationship between neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio and obstructive sleep apnea syndrome  
J.S. Lee (Anyang, KR)

12:30 - 12:33  P402  
Estimating obstructive sleep apnea in cyprus: a randomized stratified epidemiological study using STOP-BANG questionnaire  
F. Frangopoulos (Nicosia, CY)

12:33 - 12:36  P403  
Decreased thickness of peripapillary retinal nerve fibre layer and macular layer in patients with moderate and severe obstructive sleep apnoea syndrome  
P.-W. Lin (Kaohsiung, TW)
Scientific Programme

Thursday, 27 September 2018

12:36 - 12:39  P404  Improvement of visual sensitivity and retinal thickness after continuous positive airway pressure in patients with obstructive sleep apnoea syndrome
H.-C. Lin (Kaohsiung, TW)

12:39 - 12:42  P405  Does CPAP treatment lead to increased light and moderate-vigorous physical activity in OSA patients with cardiac or cerebrovascular events?
D. Stevens (Daw Park, SA, AU)

12:42 - 12:45  P406  Prevalence of parasomnias in relation to presence and severity of obstructive sleep apnea. A registry-based cross-sectional study
R.S. Lundetræ (Bergen, NO)

12:45 - 12:48  P407  Positional dependency in mild obstructive sleep apnoea in the European Sleep Apnoea Database (ESADA) study
I. Bouloukaki (Heraklion, GR)

12:48 - 12:51  P408  Clinical judgement in mild OSA - data from the European Sleep Apnoea Database (ESADA) study
I. Bouloukaki (Heraklion, GR)

12:51 - 12:54  P409  Effect of oxygen supplementation on sleep and nocturnal breathing in patients with chronic obstructive pulmonary disease travelling to high altitude: randomized cross-over trial
L. Tan (Chengdu, Sichuan Province, CN)

12:00 - 13:00  Breathing disorders 4

12:00 - 12:03  P410  Mild cognitive impairment and its risk factors in Chinese patients with obstructive sleep apnea
R. Chen (Suzhou, CN)

12:03 - 12:06  P411  Characterization and severity assessment of patients with obstructive sleep apnea
N. Kyuchukov (Pleven, BG)

12:06 - 12:09  P412  Comparison of apnea detection using nasal pressure transducer, oronasal thermal airflow sensor, and tracheal sound sensor
M. Glos (Berlin, DE)

12:09 - 12:12  P413  Age-related differences in the ability of c-reactive protein to detect cardiometabolic risk in mild-to-moderate obstructive sleep apnoea
A. Vgontzas (Hershey, PA, US)

12:12 - 12:15  P414  Is the stop-bang questionnaire a good clinical predictor for sleep-disordered breathing in the general population?
F. Bauters (Ghent, BE)
## Scientific Programme

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<tr>
<td>12:15 - 12:18</td>
<td>P415</td>
<td>Severe obstructive sleep apnea: positional patients (PP) vs. non-positional patients (NPP)</td>
<td>A. Oksenberg (Raanana, IL)</td>
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<tr>
<td>12:18 - 12:21</td>
<td>P416</td>
<td>Sleep disturbances and asthma control among Bulgarian asthmatic patients</td>
<td>Z. Ivanova (Pleven, BG)</td>
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<tr>
<td>12:21 - 12:24</td>
<td>P417</td>
<td>Cerebral white matter and cognitive decline in middle-aged and older adults with obstructive sleep apnea</td>
<td>M.-È. Martineau-Dussault (Montreal, QC, CA)</td>
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<tr>
<td>12:24 - 12:27</td>
<td>P418</td>
<td>Analysis of continuous positive airway pressure adherence in obstructive sleep apnea subjects: a mixed qualitative and quantitative approach</td>
<td>M. Amini (Mashhad, IR)</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P419</td>
<td>Patient barriers in acceptance of polysomnography ordered by doctor - a qualitative study</td>
<td>M. Amini (Mashhad, IR)</td>
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<tr>
<td>12:30 - 12:33</td>
<td>P420</td>
<td>Obstructive sleep apnoea syndrome with cranio facial abnormalities: case report and review of literature</td>
<td>B. Omarjee (Saint Denis, RE)</td>
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<td>12:33 - 12:36</td>
<td>P421</td>
<td>Psychometric properties of the 9-item Ethos brief among obstructive sleep apnea patients</td>
<td>M. Ulander (Linkoping, Ostergotland, SE)</td>
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<td>12:36 - 12:39</td>
<td>P422</td>
<td>A patient with concomitant catathrenia, snoring and central sleep apnea events. The polysomnographic differences between them</td>
<td>S. Delis Gómez (Madrid, ES)</td>
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<td>12:39 - 12:42</td>
<td>P423</td>
<td>Obstructive sleep apnea-hypopnea syndrome and comorbidities: a retrospective Moroccan study</td>
<td>A. Jniene (Rabat, MA)</td>
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<td>12:42 - 12:45</td>
<td>P424</td>
<td>Vitamin D deficiency by obstructive sleep apnea (OSA) severity: the importance of an adequate supplementation.</td>
<td>R. Silvestri (Messina, IT)</td>
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<td>12:45 - 12:48</td>
<td>P425</td>
<td>Central sleep apnea and cardiovascular burden: sex differences in a retrospective romanian population</td>
<td>O.C. Deleanu (Bucuresti, RO)</td>
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<tr>
<td>12:48 - 12:51</td>
<td>P426</td>
<td>Hypertension in obstructive sleep apnea is associated with increased carbonic anhydrase activity</td>
<td>D. Zou (Gothenburg, SE)</td>
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<tr>
<td>12:51 - 12:54</td>
<td>P427</td>
<td>Association between sleep disordered breathing symptoms, sleep apnea and socio-economic status: a systematic review of the literature</td>
<td>O. Guglielmi (Genoa, Italy, IT)</td>
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<tr>
<td>12:54 - 12:57</td>
<td>P428</td>
<td>Daytime dyspnea is a strong predictor of sleep apnea in an unselected population of COPD patients</td>
<td>D. Hansson (Gothenburg, SE)</td>
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<td>12:00 - 13:00</td>
<td><strong>Insomnia 3</strong></td>
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<td>12:00 - 12:03</td>
<td>P429</td>
<td>Time estimation following a nap condition in good sleepers</td>
<td>M. Salanitro (Swansea, UK)</td>
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<tr>
<td>12:03 - 12:06</td>
<td>P430</td>
<td>Modelling sleep state misperception at sleep onset</td>
<td>L. Hermans (Eindhoven, NL)</td>
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<tr>
<td>12:06 - 12:09</td>
<td>P431</td>
<td>Sleep quality related with exercise duration and timing in community dwelling adults</td>
<td>J. Lee (Chunchon, KR)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P432</td>
<td>Patient’s perception of comorbid anxiety and insomnia: a qualitative approach</td>
<td>S.-E. Nadeau (Québec, QC, CA)</td>
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<td>12:12 - 12:15</td>
<td>P433</td>
<td>The efficacy of cognitive and behavior therapies for insomnia on daytime symptoms: a systematic review and network meta-analysis</td>
<td>F. Benz (Freiburg, DE)</td>
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<td>12:15 - 12:18</td>
<td>P434</td>
<td>Neural correlates of cognitive control functioning in individuals with insomnia disorder</td>
<td>C. Muscarella (Brussels, BE)</td>
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<td>12:18 - 12:21</td>
<td>P435</td>
<td>Tracking nightly changes in pre-sleep cognitive arousal during sleep restriction therapy</td>
<td>L.F. Maurer (Oxford, Oxfordshire, UK)</td>
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<td>12:21 - 12:24</td>
<td>P436</td>
<td>Internet-based CBT for insomnia in the general population - a description of design, measurements and interventions in recent RCT studies</td>
<td>S. Siebmanns (Jönköping, SE)</td>
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<td>12:24 - 12:27</td>
<td>P437</td>
<td>“You can’t always get what you want” - methodological challenges with an internet-based CBT intervention for insomnia among patients with cardiovascular disease</td>
<td>S. Siebmanns (Jönköping, SE)</td>
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<td>12:27 - 12:30</td>
<td>P438</td>
<td>The association between insomnia, stress reactivity and hyperarousal in women in menopausal transition</td>
<td>O. Ballot (Quebec, QC, CA)</td>
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12:30 - 12:33  P439  Racing thoughts in insomnia are associated with insomnia severity and mood instability: towards a better characterisation of a key clinical symptom
L. Weiner (Strasbourg, FR)

12:33 - 12:36  P440  Evaluation of Insomnia among workers of a cast iron factory
M. Saraei (Tehran, IR)

12:36 - 12:39  P441  Searching for paradoxical insomnia
D. Neutel (Lisbon, PT)

12:39 - 12:42  P442  Sleep quality in shift workers of offshore petroleum industry
A. Zahabi (Tehran, IR)

12:42 - 12:45  P443  Insomnia and cognitive function in older adults: a cross-sectional analysis of the Canadian Longitudinal Study on Aging
N. Cross (Montreal, QC, CA)

12:45 - 12:48  P444  Chronic insomnia in morning and evening persons, and short and long-term effects of unguided internet-based cognitive behavior therapy for insomnia
Ø. Vedaa (Trondheim, NO)

12:48 - 12:51  P445  Smartphones may serve as efficient sleep therapists
A. Baharav (Petach Tiqva, IL)

12:51 - 12:54  P446  The genetic liability for insomnia is associated with the number of awakenings during sleep in young and healthy individuals
P. Ghaemmaghami (Liege, BE)

12:00 - 13:00  Hypersomnia 2

12:00 - 12:03  P447  Serum of narcolepsy type 1 patients does not decrease hypocretin receptor 2 function
M. Schinkelshoek (Leiden, NL)

12:03 - 12:06  P448  Sleep-state and dream perception in sleep disorders
M. Schinkelshoek (Leiden, NL)

12:06 - 12:09  P449  Personality traits in subjective perception of hypersomnolence
J. Buskova (Klecany, CZ)

12:09 - 12:12  P450  Disturbed nighttime sleep in patients with central disorders of hypersomnolence
R. Wix Ramos (Madrid, ES)
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<td>12:12 - 12:15</td>
<td>P451</td>
<td>The role of emotion regulation in narcolepsy with cataplexy</td>
<td>U. Kallweit (Hagen, DE)</td>
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<td>12:15 - 12:18</td>
<td>P452</td>
<td>Anterior hippocampus volume loss in narcolepsy with cataplexy</td>
<td>V. Nemcova (Praha, CZ)</td>
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<td>12:18 - 12:21</td>
<td>P453</td>
<td>Relationship between efficacy endpoints and measures of functional</td>
<td>T.E. Weaver (Chicago, IL, US)</td>
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<td></td>
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<td>status and health-related quality of life (HRQoL) in narcolepsy patients treated for excessive sleepiness</td>
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<td>12:24 - 12:27</td>
<td>P455</td>
<td>Impact of narcolepsy on educational skills in young Polish patients</td>
<td>A. Wierzbicka (Warsaw, PL)</td>
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<td>12:27 - 12:30</td>
<td>P456</td>
<td>Relationship between efficacy endpoints and measures of functional status and health-related quality of life (HRQoL) in obstructive sleep apnea patients treated for excessive sleepiness</td>
<td>S.D. Mathias (Winter Park, FL, FL, US)</td>
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<td>12:30 - 12:33</td>
<td>P457</td>
<td>Motor vehicle accidents in patients with excessive daytime sleepiness</td>
<td>K. Sadeghniiat-Haghighi (Tehran, IR)</td>
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<td>12:33 - 12:36</td>
<td>P458</td>
<td>Suboptimal adherence to treatment is common in patients with narcolepsy</td>
<td>L. Pérez-Carbonell (London, UK)</td>
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<td>12:36 - 12:39</td>
<td>P459</td>
<td>Kleine-Levin syndrome or migraine with brainstem aura?</td>
<td>C. Gutierrez Muñoz (Santander, ES)</td>
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<td>12:39 - 12:42</td>
<td>P460</td>
<td>Polysomnographic features related to REM sleep of patients with narcolepsy</td>
<td>T. Yagi (Kawasaki, Kanagawa, JP)</td>
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Poster Session, Poster, Poster Exhibition

12:00 - 13:00

**Neurological disorders 2**

**Chairs**

C. Baumann (CH)

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<td>12:00 - 12:03</td>
<td>P461</td>
<td>Sleep disorders in patients with Leber hereditary optic neuropathy</td>
<td>I. Přihodová (Praha, CZ)</td>
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<td>12:03 - 12:06</td>
<td>P462</td>
<td>Does the excessive daytime sleepiness in advanced Parkinson’s disease depend on the quality of night time sleep?</td>
<td>K. Shevtsova (Moscow, RU)</td>
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### Scientific Programme

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<tr>
<td>12:06 - 12:09</td>
<td>P463</td>
<td>Insomnia, nightmares and daytime sleepiness in university students with ADHD</td>
<td>A. Schlarb (Bielefeld, DE)</td>
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<td>12:09 - 12:12</td>
<td>P464</td>
<td>Alteration of cyclic alternating pattern correlates with impairment of heart rate variability in patients affected by amyotrophic lateral sclerosis</td>
<td>M.M.F. Puligheddu (Monserrato, IT)</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P465</td>
<td>Sleep fit: a new app to assess sleep symptoms in Parkinson's disease</td>
<td>A. Mascheroni (Manno, CH)</td>
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<td>12:15 - 12:18</td>
<td>P466</td>
<td>Nocturnal stridor treated with continuous positive airway pressure in a patient with multiple system atrophy: a case study</td>
<td>P. Peřínová (Prague, CZ)</td>
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<td>12:18 - 12:21</td>
<td>P467</td>
<td>A young man with multiple system atrophy - how does polysomnography help?</td>
<td>I. Luzeiro (Coimbra, PT)</td>
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<tr>
<td>12:21 - 12:24</td>
<td>P468</td>
<td>Brain white matter damage and its association with neuronal synchrony during sleep</td>
<td>E. Sanchez (Montreal, QC, CA)</td>
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<td>12:24 - 12:27</td>
<td>P469</td>
<td>Visual dysfunction and neurodegeneration in Rem sleep behavior disorder and Parkinson's disease: a visual evoked potentials study</td>
<td>R. Cremascoli (Porto Valtravaglia, VA, IT)</td>
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<td>12:27 - 12:30</td>
<td>P470</td>
<td>Total sleep deprivation unmasks subjective daytime sleepiness and impairments in alertness unique to mild traumatic brain injury</td>
<td>A. McKeon (Silver Spring, MD, US)</td>
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<td>12:30 - 12:33</td>
<td>P471</td>
<td>Daytime sleepiness in patients with chronic fatigue syndrome</td>
<td>I. Bileviciute-Ljungar (Stockholm, SE)</td>
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<td>12:33 - 12:36</td>
<td>P472</td>
<td>Positional difference between patients with obstructive sleep apnea with and without Parkinsonism</td>
<td>D.L. Koo (Seoul, KR)</td>
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<tr>
<td>12:36 - 12:39</td>
<td>P473</td>
<td>Effects of ischemic stroke on sleep architecture: a retrospective study</td>
<td>L. Pichler (Vienna, AT)</td>
</tr>
<tr>
<td>12:39 - 12:42</td>
<td>P474</td>
<td>Regular exercise program impacts positively on sleep disturbances, depression and fatigue in female patients with multiple sclerosis</td>
<td>D. Sadeghi Bahmani (Basel, CH)</td>
</tr>
<tr>
<td>12:42 - 12:45</td>
<td>P475</td>
<td>Among patients with multiple sclerosis (MS) both objective and subjective sleep, depression, fatigue and paresthesia improved after three weeks of intense rehabilitation</td>
<td>D. Sadeghi Bahmani (Basel, CH)</td>
</tr>
<tr>
<td>12:45 - 12:48</td>
<td>P476</td>
<td>SLOW WAVE ACTIVITY (SWA) UNDER CONDITIONS OF MICROGRAVITY: THE EFFECTS OF 7 DAYS OF WHOLE BODY UNLOADING USING A HYPERBUOYANCY FLOATATION (HBF) BED</td>
<td>V. Gnoni (London, UK)</td>
</tr>
</tbody>
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Scientific Programme

Thursday, 27 September 2018

12:48 - 12:51    P477  Which patients have abnormal spindles and K complexes on routine PSGs?
                  S. Parreira (Lisboa, PT)

12:00 - 12:03    P478  Poor sleep quality in patients with type 2 diabetes in association with melatonin and other factors.
                  N. Limba (Riga, LV)

12:03 - 12:06    P480  The comparison of dexmedetomidine and midazolam for sleep in critically ill patients
                  S.J. Kim (Ras Al Khaimah, UAE, AE)

12:06 - 12:09    P482  Hypopharyngeal surgery for OSAS - side effects
                  A. Katbeh (Tel Aviv, IL)

12:09 - 12:12    P483  Sleep in ATR-X
                  P. van Mierlo (Heeze, NL)

12:12 - 12:15    P484  Non-apnoea sleep disorder increases the risk of incident heart failure-a nationwide population-based cohort study
                  I.-D. Wang (Taipei, TW)

12:15 - 12:18    P485  Opioid use in adults referred for sleep disorder assessment and associated long-term consequences: a population-based study
                  T. Kendzerska (Ottawa, CA)

12:18 - 12:21    P486  Analysis of tissue metalloproteinase inhibitor-1 gene polymorphism (C536T) in non-valvular atrial fibrillation patients with concomitant obstructive sleep apnea-hypopnea syndrome
                  T. Balabanovich (Grodno, BY)

12:21 - 12:24    P487  Effects of sleep extension on glucose metabolism in chronically sleep-deprived individuals
                  A. So-ngern (Khon Kaen, TH)

12:24 - 12:27    P488  Respiratory events, heart rate and oxygen parameters in obstructive sleep apnea - chronic obstructive pulmonary disease patients
                  S. Mihaicuta (Timisoara, RO)

12:27 - 12:30    P489  Anthropometric and comorbidity differences in patient with obstructive sleep apnea and chronic obstructive pulmonary disease
                  S. Mihaicuta (Timisoara, RO)

12:30 - 12:33    P490  Sleep bruxism, low back pain and quality of life
                  I. Luzeiro (Coimbra, PT)
## Scientific Programme

### Thursday, 27 September 2018

<table>
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<th>Time</th>
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<th>Authors/Institutions</th>
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</thead>
<tbody>
<tr>
<td>12:33 - 12:36</td>
<td>P492</td>
<td>The role of chronotype and sleep hygiene in the treatment of obesity</td>
<td>E. Fárková (Klecany, Česká republika, CZ)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P493</td>
<td>Are subjective measurements of insomnia sufficient in chronic pain?</td>
<td>K. Abeler (Tromsø, NO)</td>
</tr>
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</table>

**Poster Session, Poster, Poster Exhibition**

### 12:00 - 13:00

#### Psychiatric & behavioural disorders 2

**Chairs**
C. Nissen (Berne, CH)

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<thead>
<tr>
<th>Time</th>
<th>Presentation Code</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 - 12:03</td>
<td>P494</td>
<td>Insomnia disorder as a predictor of mental disorders and pain: a systematic review and meta analysis</td>
<td>E. Hertenstein (Berne, CH)</td>
</tr>
<tr>
<td>12:03 - 12:06</td>
<td>P495</td>
<td>Sleep in individuals at risk of bipolar disorder</td>
<td>P. Jawinski (Berlin, DE)</td>
</tr>
<tr>
<td>12:06 - 12:09</td>
<td>P496</td>
<td>Family irregularity disturbs the development of sleep in children</td>
<td>M.E. Koopman-Verhoeff (Rotterdam, NL)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>P498</td>
<td>Bi-directional relationship between sleep and psychiatry illness</td>
<td>J. Isaac (Beja, PT)</td>
</tr>
<tr>
<td>12:12 - 12:15</td>
<td>P499</td>
<td>Which daytime impairments are specific to insomnia and which overlap with depression: a case-control study</td>
<td>X.W. Ji (Quebec, QC, CA)</td>
</tr>
<tr>
<td>12:15 - 12:18</td>
<td>P500</td>
<td>Impact of sleep restriction on mood and emotion regulation in adolescents with attention-deficit/hyperactivity disorder</td>
<td>S. Becker (Cincinnati, OH, US)</td>
</tr>
<tr>
<td>12:18 - 12:21</td>
<td>P501</td>
<td>Therapeutic auditory stimulation during sleep in depression: preliminary findings</td>
<td>K.V. Danilenko (Novosibirsk, RU)</td>
</tr>
<tr>
<td>12:24 - 12:27</td>
<td>P503</td>
<td>Digital media use before bedtime and sleep quality among Finnish adolescents</td>
<td>N. Sandman (Turku, FI)</td>
</tr>
<tr>
<td>12:27 - 12:30</td>
<td>P504</td>
<td>Daylight exposure, depression and sleep in adolescents</td>
<td>C. Moreno (Sao Paulo, BR)</td>
</tr>
<tr>
<td>12:30 - 12:33</td>
<td>P505</td>
<td>Auditory closed-loop stimulation of the sleep slow oscillations in patients with schizophrenia</td>
<td>R. Göder (Kiel, DE)</td>
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12:33 - 12:36  P506  High risk of OSA increases affect dysregulation among patients with schizophrenia spectrum disorder: an effect mitigated by the presence of a concurrent substance use disorder
J. De Koninck (Ottawa, ON, CA)

12:36 - 12:39  P507  Severity of paranoid thoughts in a non-clinical sample moderates the relationship between previous night sleep and next-day paranoia: a prospective study using experience sampling methodology
J. Barton (Manchester, UK)

12:39 - 12:42  P508  Daily activity levels, sleep quality and chronotypes in the early phase of psychosis
J.-M. Petit (Lausanne, CH)

12:42 - 12:45  P509  Sleep as a moderator of the relationship between child maltreatment and romantic relationship patterns
A. Schlarb (Bielefeld, DE)

12:00 - 13:00  Paediatrics 1

12:00 - 12:03  P512  Association between REM sleep EEG connectivity and daytime core symptoms in children with Autism Spectrum Disorder
R. Godbout (Montreal, QC, CA)

12:03 - 12:06  P513  The relationship between sleep and temperament in early childhood
I. Morales Muñoz (Helsinki, Finland, Fi)

12:06 - 12:09  P514  A full sleep assessment in children with attention deficit hyperactivity disorders (ADHD)
S. Miano (Lugano, CH)

12:09 - 12:12  P515  Clinical and patient global impression in a study of sodium oxybate in children and adolescents with narcolepsy with cataplexy
G. Piazzii (Bologna, IT)

12:12 - 12:15  P516  The impact of experimental sleep restriction on adolescent mood
M. Short (Adelaide, SA, AU)

12:15 - 12:18  P517  The predictive value of polysomnography combined with quality of life for treatment decision of children with habitual snoring related to adenotonsillar hypertrophy
G. Zhao (Beijing, Beijing, CN)

G. Zhao (Beijing, Beijing, CN)
Scientific Programme

Thursday, 27 September 2018

12:21 - 12:24  P519  Sleep onset latency and psychologic problems in Siberian adolescents: the school-based study
S. Tereshchenko (Krasnoyarsk, RU)

12:24 - 12:27  P520  Sleep spindles features in obesity obstructive sleep apnea adolescents
N. Semenova (Irkutsk, RU)

12:27 - 12:30  P521  The relationship between sleep habits and positive and negative emotions in infants and toddlers: a preliminary study
V. Bacaro (Rome, IT)

12:30 - 12:33  P522  Polysomnographic study in primary-school children with Attention Deficit Hyperactivity Disorder
R. Carcangiu (Rouffach, FR)

12:33 - 12:36  P523  Night-to-night sleep variability and objective short sleep duration are associated with impaired sympathetic-parasympathetic balance in adolescents
J. Fernandez-Mendoza (Hershey, PA, US)

12:36 - 12:39  P524  Self-assessed sleep quality and it influencing factors in Latvian adolescents
M. Celmina (Riga, LV)

12:39 - 12:42  P525  Infants’ sleep development during the 1 year after birth under nocturnal co-sleep conditions
H. Eto (Nagasaki, Nagasaki, JP)

12:42 - 12:45  P526  The association of sleep disturbances and gastroesophageal reflux in adolescents
S. Tereshchenko (Krasnoyarsk, RU)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P268  Morning physiological changes after a dawn simulation light
V. Gabel (Palo Alto, CA, US)

12:06 - 12:09  P270  Sleep disorders, age-related estrogen deficiency and melatonin in therapy
N. Semenova (Irkutsk, RU)

12:09 - 12:12  P271  Sleep quality of older adults living in different housing arrangements
A. Koscec Bjelajac (Zagreb, HR)

12:12 - 12:15  P272  From RBD to AD or mixed neurodegeneration? A case report
A. Galbiati (Milan, IT)
Scientific Programme

Thursday, 27 September 2018

12:15 - 12:18  P273  Links between circadian rhythm fragmentation, regular physical activity and amyloid burden in healthy older adults
S. Rehel (Caen, FR)

12:18 - 12:21  P274  Sleep quality, excessive daytime somnolence and quality of life of elderly
G.S. Brandão (Senhor do Bonfim, BA, Brazil., BR)

12:21 - 12:24  P275  Sleep-wake patterns in older adults with mild cognitive impairment
P. Peirano (Santiago, Region Metropolitana, CL)

12:24 - 12:27  P276  Subjective sleepiness and executive functions over a 14-hour wake period in elderly subjects
B. Albinni (Caserta, IT)

12:27 - 12:30  P277  Home exercise improves the quality of sleep and daytime sleepiness of elderly
L.V.F. Oliveira (Anapolis (GO), BR)

12:30 - 12:33  P278  Age related sleep stage trends as measured using remote sleep sensing hardware
B. Quinlivan (Dublin, IE)

12:33 - 12:36  P279  Sleep disorders and cognitive impairment: a longitudinal study
C.A.M. Lo Iacono (Rome, Rome, IT)

12:36 - 12:39  P280  Nightly Hypoxemia in the elderly inpatient population and its link to dementia
S. Wimmer (Bad Aibling, DE)

13:00 - 13:30  Poster Session, Poster, Poster Exhibition

13:05 - 13:55  ESRS Women's Forum

Chairs
R. Winsky-Sommerer (Surrey, UK)

13:05 - 13:15  Clearing career hurdles
R. Winsky-Sommerer (Surrey, UK)

13:15 - 13:30  Mid-career academia: opportunities and challenges
L. Tarokh (Berne, CH)

13:30 - 13:55  Discussion
Scientific Programme

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<th>Time</th>
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<tbody>
<tr>
<td>13:05 - 14:05</td>
<td><strong>Satellite Symposium - Nox Medical: Beyond the AHI</strong> sponsored by Nox Medical</td>
<td>Sydney</td>
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<tr>
<td>13:05 - 13:25</td>
<td><strong>Title to be announced</strong></td>
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<tr>
<td>13:25 - 13:45</td>
<td><strong>Title to be announced</strong></td>
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<tr>
<td>13:45 - 14:05</td>
<td><strong>Title to be announced</strong></td>
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<tr>
<td>13:05 - 14:05</td>
<td><strong>Satellite Symposium - Jazz Pharmaceuticals: A potential new treatment for the management of excessive sleepiness in narcolepsy and obstructive sleep apnea</strong> supported by Jazz Pharmaceuticals</td>
<td>Singapore</td>
</tr>
<tr>
<td>13:05 - 13:23</td>
<td><strong>A potential new wake-promoting agent: what do we know?</strong></td>
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<td>13:23 - 13:41</td>
<td><strong>Efficacy of solriamfetol on excessive sleepiness in narcolepsy and in obstructive sleep apnoea</strong></td>
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<tr>
<td>13:41 - 13:59</td>
<td><strong>Maintenance of efficacy and safety of solriamfetol on excessive sleepiness in narcolepsy and in obstructive sleep apnoea</strong></td>
<td></td>
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<tr>
<td>13:59 - 14:05</td>
<td><strong>Conclusion</strong></td>
<td></td>
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<td>13:05 - 14:05</td>
<td><strong>Track Human Sleep, Round Table, Osaka</strong></td>
<td></td>
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<tr>
<td>13:05 - 13:10</td>
<td><strong>Daylight saving time (DST) - forever?</strong></td>
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<tr>
<td>13:10 - 14:05</td>
<td><strong>Panel discussion</strong></td>
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<td></td>
<td><strong>K. Wright (Boulder, US)</strong></td>
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<td><strong>G. Vandewalle (Liege, BE)</strong></td>
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<td><strong>E. Winnebeck (Munich, DE)</strong></td>
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<td><strong>D.-J. Dijk (Surrey, UK)</strong></td>
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Scientific Programme

Thursday, 27 September 2018

Respiratory Track, Joint Symposium, San Francisco

14:15 - 16:15

**Joint Symposium ESRS - ERS Interaction between sleep and obstructive airway disease: a cocktail party**

Motivation: The proposed Symposium is an exciting issue for pneumonologists, sleep specialists who are being confronted with an increasing number of patients with mixed breathing disorders during sleep related to COPD and asthma. This important clinical topic was never covered before.

Aims: Participants will get more insight in the spectrum of complicated breathing disorders, in which COPD and asthma play a critical role. Pathophysiological mechanisms and interactions will be discussed, and will lead to a better approach to manage these problems.

Target audience: clinicians, practitioners, healthcare scientists, sleep medicine scientists

**Chairs**
W. McNicholas (Dublin, IE)

14:15 - 14:45  
110

**Sleep disorders in COPD: etiology and consequences**
W. McNicholas (Dublin, IE)

14:45 - 15:15  

**Asthma control and disturbed sleep**
O. Marrone (Palermo, IT)

15:15 - 15:45  

**Management of sleep disorders in COPD and asthma**
L. Grote (Gothenburg, SE)

15:45 - 16:15  

**NIV in patients with (hypercapnic) COPD**
P. Wijkstra (Groningen, NL)
Scientific Programme

Thursday, 27 September 2018

14:15 - 16:15

The different enigmatic faces of REM sleep behavior disorder

This Symposium will touch different aspects of REM sleep behavior disorder (RBD) and its implications. Most patients with idiopathic RBD (iRBD) convert to overt α-synucleinopathy, mainly Parkinson disease (PD) or dementia with Lewy bodies. In patients with iRBD α-synuclein deposits can be found in the autonomic and peripheral nervous system, e.g. in the gastrointestinal tract and the skin. Moreover, even patients with longstanding iRBD (≥10 years from diagnosis), which seem not to progress to overt α-synucleinopathy, present biomarkers of α-synuclein related neurodegeneration. Taken together, these findings argue against the existence of “idiopathic” RBD. If so-called “idiopathic” RBD is an early stage α-synucleinopathy, these patients represent the ideal target population for neuroprotective trials. However, the conversion to overt α-synucleinopathy can take more than 10 years from the diagnosis. For this reason, future neuroprotective trials in iRBD must take into account important aspects, as the presence of biomarkers associated with early conversion or worsening over time, in order to identify the more appropriate iRBD cohort to be investigated.

Even focusing on a well-studied α-synucleinopathy, PD, the co-occurrence of RBD and its significance still remain unclear. Some patients report a history of RBD many years before diagnosis of PD, some develop RBD only after PD onset, other never present RBD. Interestingly, the presence of RBD has been reported to have prognostic value, and to be related to a specific PD phenotype. Ongoing studies systematically investigating sleep and biomarkers of neurodegeneration in patients with newly diagnosed PD aim to clarify these open questions.

RBD can also be present in other conditions, among them autoimmune and neurodegenerative disorders. The anti-IgLON5 disease was first described recently, in 2014. Patients affected by anti-IgLON5 disease present different neurological symptoms, and sleep is affected in all the cases described by now. RBD seems to be always present in this condition, although of mild severity. Differences in phenotypic manifestations of RBD in different disorders may be due to a main involvement of different brainstem nuclei or pathways.

This Symposium will go through different aspects of RBD, addressing open questions and new aspects, giving possible answers or hypotheses and stimulating discussion.

Chairs
A. Stefani (Innsbruck, AT)
A. Heidbreder (Münster, DE)

14:15 - 14:45  111

Does isolated REM sleep behavior disorder exist? Lesson learned from the longstanding non-convertors
A. Stefani (Innsbruck, AT)

14:45 - 15:15  112

How to design a neuroprotective trial for idiopathic rem sleep behavior disorder
J. Santamaria (Barcelona, ES)

15:15 - 15:45  113

Why do not all patients with Parkinson disease have RBD?
F. Provini (Bologna, IT)

15:45 - 16:15  114

The universal presence of RBD in autoimmune/neurodegenerative disorders: the anti-IgLONS disease
A. Heidbreder (Münster, DE)
Neuropsychiatry Track, Oral Session, Sydney

14:15 - 15:15

**Insomnia disorder**

**Chairs**
C. Baglioni (Freiburg, DE)
D. Riemann (Freiburg, DE)

14:15 - 14:27 O115 **Feeling awake while asleep: a high-density EEG assessment of sleep perception**
S. Lecci (Lausanne, CH)

14:27 - 14:39 O116 **Insomnia with objective short sleep duration is associated with cardiometabolic, cardiovascular and cerebrovascular disease risk**
J. Fernandez-Mendoza (Hershey, PA, US)

14:39 - 14:51 O117 **Bedtime social media use and insomnia in adults**
S. Hyvämäki (Turku, FI)

14:51 - 15:03 O118 **Treatment response of insomnia disorder phenotypes and subtypes to standardised digital cognitive behavioural therapy**
C. Gordon (Camperdown, AU)

15:03 - 15:15 O119 **How best to sequence cognitive behavioural therapy and medication when treating chronic insomnia with and without psychiatric comorbidity?**
C.M. Morin (Quebec, QC, CA)
Scientific Programme

Thursday, 27 September 2018

14:15 - 16:15  
Local Network Sleep in vivo and in vitro

The world view of sleep and sleep research is changing. Such paradigm shifts are initiated by anomalies that cannot be explained by the universally accepted framework. Sleep had been viewed as a whole brain phenomena, a behavior regulated by sleep regulatory circuits. The accrue of anomalies of this paradigm began with Kristiansen and Courtois (McGill University) who described in 1949 that a key measure used to define sleep, large EEG slow waves, occur in cortical islands lacking thalamic input. Subsequent descriptions of unihemispheric sleep and clinical dissociated states indicated that parts of the brain could be asleep while other parts were awake. Such findings led to theoretical proposals in 1993 and 1994 that sleep was universal property of small circuits and was initiated by local cell use. Subsequent experimental findings indicated that localized cortical EEG delta power is dependent upon prior use of the local area and that individual cortical columns entered into sleep-like states semi-independent of whole brain cortical activity. These theories and findings precipitated questions such as: What is the minimal component of brain capable of manifesting sleep? Is sleep a fundamental property of any small neuronal network whether in vivo or in vitro? Do small network emergent properties such as EEG synchroniztion or delta power parallel those of brain? How do small network states influence the transition into whole brain states? How is sleep regulated in animals with very few neurons, e.g. C. elegans? Is sleep homeostasis a property of the sleep-like states of small networks and similar to whole brain sleep homeostasis? Answers to these questions have accelerated the paradigm shift now undergoing within the sleep research and clinical worlds. The 4 speakers have been at the forefront of this change and each will put their, and other’s findings, within the context of a new view of what sleeps, how it is regulated, and the implications for sleep evolution and function.

Chairs
J. Krueger (Spokane, WA, US)
M. Tafti (Lausanne, CH)

14:15 - 14:45  120  
The slow oscillation in vitro: a model for sleep regulation  
M. Tafti (Lausanne, CH)

14:45 - 15:15  121  
Neuronal network dynamics of sleep and wakefulness in C. elegans  
M. Zimmer (Vienna, AT)

15:15 - 15:45  122  
Local origin of slow EEG waves during sleep  
I. Timofeev (Quebec, CA)

15:45 - 16:15  123  
Gene-dependent state oscillations in vivo and in vitro  
J. Krueger (Spokane, WA, US)
Several sleep and chronobiology research have successful banked large amount of data to gain insight notably in narcolepsy, chronotype, insomnia and sleep duration. These examples remain however far from being the norm, probably because sleep and wakefulness regulation is such a rich phenomenon requiring multimodal and multilevel detailed phenotyping (omics, electrophysiology, behavior, etc.).

This symposium will bring together three important actors of the biobanking world. It will increase awareness for biobanking challenges and could contribute to novel European sharing initiatives.

Gilles Vandewalle will summarize the new regulations pushing research towards the “open” science, highlight ethical issues and challenges faced while creating a multimodal databases. Simon Warby, head of the Sleep Research Biobank of the Canadian Sleep and Circadian Network, will discuss his experience with the implementation of the Canadian biobank, the standardization steps used for polysomnography and blood collection, and the scientific focus of the Canadian initiative. Ioannis Xenarios, Director of Swiss-Prot and Vital-IT, will detail the challenges and diversity of expertise necessary to face “omics-technologies” and how to make DNA, RNA, protein and metabolomics data available, interoperable and reusable. He will present available tools and competences necessary to take advantage of large scale multimodal oriented consortium. Marie Brandewinder, co-head of Physip, will share her experience on EEG data banking and standardization. She will argue that the ideal biobank does not exist but that minimal requirements should be met and planned for a potential secondary uses of a biobank (which is always difficult).
Scientific Programme

Thursday, 27 September 2018

14:20 - 14:28  125  The Canadian Sleep Research Biobank
S. Warby (Montreal, CA)

14:28 - 14:36  Knowledgebased, data integration and analysis : from diabetes to sleep
I. Xenarios (Lausanne, CH)

14:36 - 14:44  The ideal database does not exist - how to not lose sleep over that?
M. Brandewinder (Paris, FR)

14:44 - 15:15  Discussion

Basic Track, Oral Session, Sydney

15:15 - 16:15  Chronobiology

Chairs
C. Schmidt (Liège, BE)
M. Gordijn (Groningen, NL)

15:15 - 15:27  O127  Objective sleepiness is reduced by daytime polychromatic white light exposures depending on melanopic lux
J. de Zeeuw (Berlin, DE)

15:27 - 15:39  O128  Influence of habitual caffeine intake and its withdrawal on circadian phase and nap sleep in the evening
J. Weibel (Basel, CH)

15:39 - 15:51  O129  Entrainment of circadian system and sleep to extremely long photoperiods in modern life and nature
J.R. Guzzetti (Stockholm, SE)

15:51 - 16:03  O130  Greater sleep inertia in young adults in early biological morning
K.-M. Zitting (Boston, MA, US)

16:03 - 16:15  O131  Subjective sleepiness and waketime are related to light perception
R. Lasauskaite (Basel, CH)

Neuropsychiatry Track, Oral Session, Osaka

15:15 - 16:15  Sleep in real life

Chairs
T. Paunio (Helsinki, Finland, FI)
D.-J. Dijk (Surrey, UK)

15:15 - 15:27  O132  Sleep, fatigue and cognitive performance on different types of fishing vessels
A. á Høvdanum (Tórshavn, FO)
### Scientific Programme

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<tr>
<td>15:27 - 15:39</td>
<td>O133</td>
<td>Do rats avoid a radiofrequency exposed environment to sleep?</td>
<td>A. Pelletier (Amiens, FR)</td>
</tr>
<tr>
<td>15:39 - 15:51</td>
<td>O134</td>
<td>Exercise effects on the circadian rhythm of adolescents with extreme evening-type circadian preference: a novel treatment to improve sleep health</td>
<td>C. Lang (Basel, CH)</td>
</tr>
<tr>
<td>15:51 - 16:03</td>
<td>O135</td>
<td>Chronotype, social jetlag and work performance in a sample of Japanese workers</td>
<td>Y. Komada (Tokyo, JP)</td>
</tr>
<tr>
<td>16:03 - 16:15</td>
<td>O136</td>
<td>Dreaming of Mars: inter-individual differences in sleep, sleepiness and performance during a year-long stay in Antarctica</td>
<td>O. Mairesse (Brussels, BE)</td>
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</table>

Respiratory Track, Keynote Lecture, San Francisco

**16:45 - 17:30**

**Keynote Lecture - Susan Redline**

**Chairs**
W. McNicholas (Dublin, IE)

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<tr>
<td>16:45 - 17:30</td>
<td>137</td>
<td>Sex and gender differences in sleep apnea: a window into understanding disease susceptibility</td>
<td>S. Redline (Boston, US)</td>
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</table>

Basic Track, Keynote Lecture, Montreal

**16:45 - 17:30**

**Keynote Lecture - Wenbiao Gan**

**Chairs**
P.-H. Luppi (Lyon, FR)

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<tr>
<td>16:45 - 16:55</td>
<td>138</td>
<td>Learning and sleep-dependent dendritic spine plasticity and maintenance</td>
<td>W. Gan (New York, NY, US)</td>
</tr>
</tbody>
</table>

Track General, ESRS Business Meeting, Montreal

**17:45 - 19:45**

**ESRS Business Meeting**
Scientific Programme

Friday, 28 September 2018

08:30 - 10:30

Headache and sleep

This symposium will cover clinical and mechanistic aspects of both headache and sleep disorders, and their relation to one another. Headache and sleep problems are highly co-morbid forming two of the most frequently reported conditions in clinical care. Although a relationship between sleep and headache has been suggested for over a century, the underlying mechanism and causes are complex, multifactorial and remain poorly understood.

Prof. Dr. Poul Jennum will first introduce the most important primary headache disorders (such as migraine, tension type headache and trigeminal autonomic cephalalgias) and review what is known about their relationship to sleep disturbances. Vice versa, he will discuss primary sleep disorders (like insomnia and sleep disordered breathing) that are associated with or may cause headache.

Dr. Christoph Schankin will give a clinical overview and update about hypnic headache. This is a rare headache disorder only occurring during sleep in the elderly, in which caffeine paradoxically can have a beneficial effect. Possible pathophysiological mechanisms have been uncovered using neuroimaging and electrophysiology and might involve hypothalamic dysfunction. Diagnostic considerations and treatment options will be discussed.

Dr. Rolf Fronczek will present an update about the intriguing relation between cluster headache, sleep and the biological clock. Cluster headache attacks occur at predictable times during the day or at night day, frequently awakening the patient. The episodic and circadian nature, the association with sleep as well as neuroimaging data suggest a role for the hypothalamus and its biological clock.

In the last presentation, Dr. Philip Holland will review the current knowledge and the latest findings regarding hypothalamic pathways involved in both headache and sleep regulation, which might contribute to a shared pathophysiology. He will further present new data and possible emerging therapeutic approaches coming directly from bench to bedside.

Chairs
R. Fronczek (Leiden, NL)
P. Jennum (Glostrup, DK)

08:30 - 09:00  139  Headache and sleep
P. Jennum (Glostrup, DK)

09:00 - 09:30  140  Cluster headache & the clock
R. Fronczek (Leiden, NL)

09:30 - 10:00  141  Hypnic headache - the undesired alarmer
C. Schankin (Berne, CH)

10:00 - 10:30  142  Hypothalamic pathways in headache & sleep
P. Holland (London, UK)
Basic Track, Symposium, Montreal

08:30 - 10:30

**Biomarkers for sleep disruption and sleep disorders**

Modern lifestyle and work schedule choices are increasingly associated with sleep disturbance and risk for developing sleep disorders that are also linked with a range of adverse health conditions, such as obesity, cardiovascular problems, mental disorders and cancer. Consequently, it is becoming more important to develop biomarkers for sleep disturbance and sleep disorders. These biomarkers should be able to define normal sleep (and circadian rhythms) and be able to detect sleep disturbance and ultimately provide predictive, diagnostic and prognostic value for sleep disorders and its comorbidities.

Derk-Jan Dijk (University of Surrey) will show how the whole-blood transcriptome provides more information than just the response of blood cells and can be used as an ‘accessible window’ to the status of the human system. Blood transcriptome biomarkers are therefore a viable solution on which to base clinical assessments of sleep and/or circadian perturbations. Emma will present computational approaches to identify candidate biomarkers within the human blood transcriptome.

Maxime Jan (PhD student, University of Lausanne) presents work looking at genome, transcriptome (liver and brain), plasma metabolome, and ‘deep’ phenome under baseline and sleep deprivation conditions in mice. In addition, ATACseq has been used to study chromatin modification to identify genomic regulatory elements that respond to sleep deprivation.

Mathieu Nollet (postdoc, The Francis Crick Institute) has used a combination of behavioural assessments, EEG analyses and next-generation RNA-Sequencing in mice in conditions of chronic stress to show that sleep disturbances and neuropsychiatric-like symptoms share common biological processes and pathways, emphasising the important role of sleep in the pathogenesis of mood disorders.

Alexandra Lahtinen (PhD student, University of Helsinki) will discuss the role of epigenetic modifications as putative biomarkers in humans for the long-term risk of the negative health effects of sleep disturbance. She will describe the results of a study aiming to identify changes in DNA methylation of blood leukocytes associated with insufficient sleep in a population-based sample and in a sample ascertained for a shift work disorder. The preliminary results give evidence for importance of the epigenetic regulation in mediating both brain-specific and systemic stress caused by compromised sleep and diurnal rhythm.

**Chairs**

S. Archer (Guildford, UK)
A. Lahtinen (Helsinki, FI)

08:30 - 09:00

**Computational approaches to identify and validate blood transcriptome biomarkers for sleep and circadian health**

D.-J. Dijk (Surrey, UK)

09:00 - 09:30

**Systems genetics of sleep loss in the mouse**

M. Jan (Lausanne, CH)

09:30 - 10:00

**Transcriptomic biomarkers of sleep disturbances and other symptoms induced by chronic stress in mice**

M. Nollet (London, UK)

10:00 - 10:30

**DNA methylation in blood leukocytes as putative biomarkers for insufficient sleep**

A. Lahtinen (Helsinki, FI)
Respiratory Track, Symposium, Sydney

08:30 - 10:30

**Pharmacological therapy of obstructive sleep apnea. Novel tools and principles.**

A pharmacological therapy in obstructive sleep apnea has since long been an elusive dream. A considerable number of established drugs have been attempted and claimed to partially effective in patients with OSA. However, drug development in OSA has turned out to be complex due to limitations such as a lack of an appropriate animal model and the fact that well as a shortness of established and appropriate end-points in clinical trials. Promising recent research has identified novel potential pathophysiological mechanisms that may serve to subclassify different phenotypes in OSA. Indeed, this characterisation has provided novel strategies in drug development. It has also enabled the identification of drug targets that may lead to higher specificity and efficacy of various drug therapies in OSA. This symposium will address strategies for trial design in OSA and review specific phathophysiological mechanisms that may be specifically addressed in drug development. Moreover, some promising target areas recently defined for drug development in OSA will be presented and discussed.

**Chairs**

J. Hedner (Gothenburg, SE)
D.J. Eckert (Sydney, AU)

08:30 - 09:00 146

**The challenge of designing trials in OSA**

J. Verbraecken (Antwerp, BE)

09:00 - 09:30 147

**Pathophysiological phenotyping as a rational for drug development**

D.J. Eckert (Sydney, AU)

09:30 - 10:00 148

**Cannabinoid receptor modulation in sleep apnea**

D. Carley (Chicago, US)

10:00 - 10:30 149

**Carbonic anhydrase activity modulation in sleep apnea**

E. Hoff (Göteborg, SE)

Neuropsychiatry Track, Oral Session, Singapore

08:30 - 09:30

**Hypersomnia**

**Chairs**

Y. Dauvilliers (Montpellier, FR)
C. Baumann (CH)

08:30 - 08:42 O150

**Kleine-Levin syndrome is associated with LMOD3 variants**

A. BaHammam (Riyadh, Riyadh, SA)

08:42 - 08:54 O151

**ADHD symptoms in H1N1-vaccinated youths with narcolepsy type 1**

S. Knudsen (Oslo, NO)

08:54 - 09:06 O152

**Repeated measures of hypocretin-1 level in individuals with narcolepsy type 1 and clinical controls**

E.W. Torstensen (Glostrup, DK)
Scientific Programme

Friday, 28 September 2018

09:06 - 09:18 O153 Sustained attention to response task (SART) shows impaired vigilance versatility in narcolepsy type 1: a simultaneous EEG-fMRI study
J.K. Gool (Amsterdam, NL)

09:18 - 09:30 O154 Alternative MSLT cutoffs for diagnosis of pediatric narcolepsy type 1
F. Pizza (Bologna, IT)

08:30 - 09:30 Track Translational, Round Table, Osaka

08:30 - 09:30 Acute or chronic caffeine consumption: what keeps you awake?

Caffeine is one of the most used stimulants in the world. It is freely available and easy accessible. It is also one of the most researched substances in our field. In most of these studies caffeine is applied acutely in animals naive to caffeine or in subjects that had to moderate caffeine use or even withdraw from caffeine for several days or weeks. Through this we have a clear picture of what acute caffeine consumption does with sleep and the sleep EEG. However, whether this effect is comparable to the more general chronic use of caffeine is unclear. This is an important gap in our present knowledge about the influence of caffeine on sleep. This symposium will discuss the possible differences between acute and chronic caffeine consumption on sleep and the sleep EEG. The first speaker (Porkka-Heiskanen) will give an overview of the working mechanisms of caffeine in relation to sleep. The second speaker (DeBoer) will present recently obtained data in which chronic and acute caffeine consumption through drinking water are compared in their influence on sleep in mice, with the remarkable result that chronic caffeine deepens sleep in mice. This will be followed by an overview of our present knowledge of chronic caffeine use in society and their influence on sleep (Landolt). The last speaker (Reichert) will present the results of a new polysomnographic study on chronic caffeine consumption and withdrawal on sleep and cognition in humans.

The symposium covers the question from molecules to mice to human and will shed light on the question whether the results obtained with acute caffeine can be applied to draw conclusions on the effect of chronic caffeine use on sleep.

Chairs
T. DeBoer (Leiden, NL)

08:30 - 08:37 155 Mechanisms of caffeine’s effect on sleep
T. Stenberg (Helsinki, FI)

08:37 - 08:44 156 Deeper sleep during chronic caffeine consumption in mice
T. DeBoer (Leiden, NL)

08:44 - 08:51 Effects of acute and chronic caffeine intake on adenosine receptors
D. Elmenhorst (Jülich, DE)

08:51 - 08:58 158 Effects of chronic caffeine consumption and caffeine withdrawal on human waking performance, sleep and brain structure
C.F. Reichert (Basel, CH)

08:58 - 09:30 Discussion
Scientific Programme

Friday, 28 September 2018

09:30 - 10:30  Neuropsychiatry Track, Oral Session, Singapore

Sleep in psychiatric disorders

Chairs
C. Nissen (Berne, CH)
A. Wirz-Justice (Basel, CH)

09:30 - 09:42  O159  The role of sleep spindles in procedural memory consolidation in depression
A. Steiger (Munich, DE)

09:42 - 09:54  O160  Poor sleep and its relation to impulsivity in forensic psychiatric patients with antisocial or borderline personality disorders
M. Van Veen (Assen, NL)

09:54 - 10:06  O161  The influence of genetic variants on sleep and health improvement in adolescents with an eveningness chronotype
M. Dolsen (Berkeley, CA, US)

10:06 - 10:18  O162  Synaptic mechanisms of therapeutic sleep deprivation in major depression
C. Nissen (Berne, CH)

10:18 - 10:30  O163  Let there be (blue-depleted) light in psychiatry
D. Vethe (Trondheim, NO)

Track General, Oral Session, Osaka

09:30 - 10:30  Epidemiology of sleep

Chairs
T. Åkerstedt (Stockholm, SE)
L. Grote (Gothenburg, SE)

09:30 - 09:42  O164  Sleep duration and mortality—does weekend sleep matter?
T. Åkerstedt (Stockholm, SE)

09:42 - 09:54  O165  Sleep fragmentation in sleep disordered breathing based on a large database (ESADA)
T. Penzel (Berlin, DE)

09:54 - 10:06  O166  Sleep disturbances associated with increased risk of mortality: UK Biobank Study
M. von Schantz (Guildford, Surrey, UK)

10:06 - 10:18  O167  Sleep in major psychiatric disorders: results from nationwide SUPER Finland study
E. Cederlöf (Helsinki, FI)

10:18 - 10:30  O168  Seasonal differences in obstructive sleep apnea severity. Results from the European Sleep Apnea Database (ESADA)
R. Staats (Lisbon, PT)
Scientific Programme

Friday, 28 September 2018

Restless legs syndrome

The pathophysiology of RLS is not yet well understood: While brain iron deficiency (BID) is well recognized as a main initial pathophysiological mechanism in the development of RLS, over the last decades, a dopaminergic hypofunction was initially hypothesized, mainly based on the therapeutic action of dopaminergic agents. Indeed, the most common pathophysiological model was adopted based on other dopamine-related movement disorders. However, while there is no doubt that dopaminergic agonists are effective at least over the short-/midterm, most of the research yielded results that suggest an existing dopaminergic hyperfunction. The emerging question becomes then how to explain the mechanism of action of dopamine agonists, the efficacy of non-dopaminergic agents or the lack of neuroimaging findings in the basal ganglia.

The Symposium will discuss animal, human, and clinical data showing our state of knowledge on iron metabolism and its role in RLS, as well as on how could it lead to neurotransmitter dysfunction. In addition, animal models investigating the possible mechanisms underlying augmentation will be presented. Furthermore, most recent animal findings on hypoadenosinergic mechanisms leading to increased dopaminergic and glutamatergic function will be discussed. Finally, we will show preliminary clinical data and discuss potential new adenosine, dopamine and glutamate-related therapeutic targets for RLS, including the dopamine agonist-induced augmentation of RLS symptoms.

Chairs

D. Garcia-Borreguero (Madrid, ES)
R.P. Allen (Baltimore, US)

11:00 - 11:30 169 Brain iron metabolism and its effects on brain neurocircuitry in RLS
R.P. Allen (Baltimore, US)

11:30 - 12:00 170 Balance-shift of spinal dopamine receptors during long-term treatment. A possible mechanism for augmentation
S. Clemens (Greenville, NC, US)

12:00 - 12:30 171 Hypoadenosinergic state as a driving force leading to hyperdopaminergic and hyperglutamatergic states in RLS
S. Ferre (Baltimore, MD, US)

12:30 - 13:00 172 The search for new therapeutic targets
D. Garcia-Borreguero (Madrid, ES)
Respiratory Track, Round Table, Montreal

11:00 - 12:00

**Transcutaneous carbon dioxide during sleep in sleep-disordered breathing: the reverse side of the coin**

Sleep is characterized by withdrawal of the wakefulness stimulus for breathing, resulting in relative hypoventilation compared with wakefulness. Hypoventilation results in increasing partial pressure of carbon dioxide, which is the main drive for respiratory and upper airway dilator muscles during sleep. Lowering CO₂ below apneic threshold results in central apnea, cyclic breathing and vasoconstriction, whereas hypercapnia stabilizes breathing and causes vasodilatation. Therefore, CO₂ measurement during sleep has potential to help in phenotyping sleep-disordered breathing, which is needed for choosing the right treatment for each patient.

Monitoring of carbon dioxide during sleep is, however, more challenging than measurement of arterial oxyhaemoglobin saturation and therefore rarely measured as part of polygraphic sleep recording.

The purpose of the proposed symposium is to review current knowledge of how to measure the partial pressure of carbon dioxide during sleep, how reliable the measurements are and how the data should be interpreted. The transcutaneous pCO₂ levels during falling asleep, arousal, and during various forms of sleep-disordered breathing, respiratory failure and periodic leg movements are presented. The potential usage of the transcutaneous pCO₂ signal as a marker of sympathetic tone or endothelial dysfunction in health and disease is discussed.

Better knowledge of the transcutaneous pCO₂ signal during sleep increases our understanding of abnormalities in control of breathing during sleep in conditions such as COPD, insomnia, periodic leg movements or sleep-disordered breathing. It also widens our understanding of the mechanisms of the association between cardiovascular diseases and disturbances of sleep. Recent advances in transcutaneous measurement technology makes nocturnal transcutaneous pCO₂ monitoring easy and reliable.

**Chairs**
O. Polo (Tampere, FI)

11:00 - 11:07
**Principles and practice of transcutaneous pCO₂ measurement during sleep**
O. Polo (Tampere, FI)

11:07 - 11:14
**Transcutaneous pCO₂ for titration and follow-up of non invasive ventilation**
R. Staats (Lisbon, PT)

11:14 - 12:00
**Discussion**
V. Rimpilä (Tampere, FI)
Scientific Programme

Friday, 28 September 2018

11:00 - 12:00  
**ESRS-WSS Education and accreditations procedures for Sleep Medicine: meeting the needs**

**Chairs**  
W. McNicholas (Dublin, IE)  
C.M. Morin (Quebec, QC, CA)

11:00 - 11:15  
**Accreditation of sleep centres in Europe - current status**  
D. Pevernagie (Gent, BE)

11:15 - 11:30  
**ESRS Examination in Sleep medicine: the scope, content and vision**  
T. Paunio (Helsinki, Finland, FI)

11:30 - 11:45  
**Sleep medicine examination by WSS worldwide**  
T. Penzel (Berlin, DE)

11:45 - 12:00  
**Sleep medicine examination: past present and future**  
M. Schmidt (Berne, CH)

11:00 - 13:00  
**The relationship between brain oscillations during sleep, neuroplasticity and stroke**

Since sleep promotes neuroplasticity, sleep related mechanisms may modulate stroke recovery. Specific brain oscillations during sleep, i.e. slow waves - which reflect neuronal bistability (an alternation between depolarized ON and hyperpolarized OFF states) - may be functionally related to the different phases of stroke recovery. In our symposium we will discuss the current state of knowledge supporting such a functional relationship: Claudio Bassetti will introduce the topic, Marcello Massimini explains the concept of sleep-like bistability and how it is related to stroke, Reto Huber outlines the parallels between sleep EEG changes during development and stroke recovery processes, and Laura Facchin from the group of Antoine Adamantidis introduces state of the art optogenetic manipulations allowing us to interact with brain oscillations related to such neuroplastic changes in animal models. In summary, the presentations included in the proposed symposium are highly integrated, cover a topic which is relevant for both clinical and basic sleep research on multiple levels, and should therefore appeal to a large audience.

**Chairs**  
R. Huber (Zurich, CH)

11:00 - 11:30  
**Thalamic control of slow waves onset and traveling**  
A. Adamantidis (Bern, CH)

11:30 - 12:00  
**A role for sleep-like bistability in stroke perilesional cortex?**  
S. Sarasso (Milan, IT)

12:00 - 12:30  
**What can we learn from sleep EEG changes during development for stroke recovery processes**  
R. Huber (Zurich, CH)
Scientific Programme

Friday, 28 September 2018

12:30 - 13:00  174  Perilesional induction of sleep slow waves improves motor recovery after ischemic stroke
L. Facchin (Bern, CH)

Poster Session, Poster, Poster Exhibition

11:00 - 12:00  Poster Session 3 - Poster viewing

Respiratory Track, Case Discussion, Sydney

12:00 - 13:00  Case Discussion: SDB

Chairs
J. Verbraecken (Antwerp, BE)

12:00 - 12:20  Obese, but only mild OSA ?
J. Verbraecken (Antwerp, BE)

12:20 - 12:40  Sleep disordered breathing in kyphoscoliosis
D. Pevernagie (Gent, BE)

12:40 - 13:00  Young, slim....and yet sleepy!
W. Randerath (Solingen, DE)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  Biochemistry & neurobiology 2

Chairs
M. Tafti (Lausanne, CH)

12:00 - 12:03  P590  The possible role of P2X7 receptors of ATP in the induction of recovery sleep following sleep deprivation
Z. Lelkes (Szeged, HU)

12:03 - 12:06  P591  Elevated glutamate levels in the anterior cingulate cortex after a sleep-inducing dose of gamma-hydroxybutyrate in humans: a magnetic resonance spectroscopy study
D.A. Dornbierer (Zurich, CH)

12:06 - 12:09  P592  Preclinical evaluation of the potential use of Pitolisant as new intervention for sleep abnormalities in Prader-Willi syndrome
M. Pace (Genova, IT)

12:09 - 12:12  P593  Optogenetic control of sleep slow waves to improve recovery after ischemic stroke
L. Facchin (Bern, CH)
Scientific Programme

Friday, 28 September 2018

12:12 - 12:15  P595  Acoustic modulation of slow-wave sleep in rats: effect of boosting or inhibiting delta activity in SWS on motor learning
C. Gonçalves Moreira (Zurich, Zurich, CH)

12:15 - 12:18  P596  Extended photoperiod alters sleep, circadian rhythmicity and expression of synaptic plasticity-associated genes. The impact of blue-enriched light
J. Grønli (Bergen, NO)

12:18 - 12:21  P597  Variability in habitual nighttime sleep predicts white matter integrity of neural impulsivity network
P. Peirano (Santiago, Region Metropolitana, CL)

12:21 - 12:24  P598  Local non-REM sleep enabled through heterogeneous thalamic burst propensity
L.M. Fernandez (Lausanne, CH)

12:24 - 12:27  P599  Thalamic dual-control of sleep and wakefulness
T. Gent (Bern, CH)

12:27 - 12:30  P600  Volume of subcortical brain areas is associated with sleep macrostructure in healthy young individuals
P. Ghaemmaghami (Liege, BE)

12:30 - 12:33  P601  IL-1β, IL-6 and TNF-α, induced by upper airway resistive breathing, downregulates respiratory controller response to hypercapnic stimuli
F. Perlikos (Athens, GR)

12:33 - 12:36  P602  Carotid Body Deafferentiation in mice with upper airway resistive breathing downregulates respiratory controller response to hypoxic stimuli
F. Perlikos (Athens, GR)

12:36 - 12:39  P603  Diurnal changes in Glutamate levels from childhood to adulthood assessed by Magnetic Resonance Spectroscopy
C. Volk (Zurich, CH)

12:00 - 13:00  Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P604  Heart rate variability and its circadian variation in patients with disorders of consciousness: a diagnostic tool?
M. Angerer (Salzburg, AT)

12:03 - 12:06  P605  Sleep, chronotype and social jet lag in a sample of Portuguese college students
M. Gonçalves (Porto, PT)
### Scientific Programme

**Friday, 28 September 2018**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>12:06 - 12:09</td>
<td>P606</td>
<td>Daytime sleepiness, salivary cortisol and melatonin levels during four-week blue light blockade. Do we adapt?</td>
<td>H. Oginska (Krakow, PL)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P607</td>
<td>Two dimensions of chronotype - some personality, mood, and behavioural correlates of subjective circadian phase and amplitude</td>
<td>H. Ogińska (Kraków, PL)</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P608</td>
<td>Human iPSC-derived fibroblasts as a model to investigate genetic and epigenetic contributions to regulation of circadian rhythms</td>
<td>N.-H. Du (Zurich, CH)</td>
</tr>
<tr>
<td>12:15 - 12:18</td>
<td>P609</td>
<td>Validation of the French version of Children's Chronotype Questionnaire in school-aged children: a study in Luxembourgish population</td>
<td>S. Figueiredo (Lisbon, PT)</td>
</tr>
<tr>
<td>12:18 - 12:21</td>
<td>P610</td>
<td>Not all circadian disruption protocols are created equal</td>
<td>A. Fisk (Oxford, UK)</td>
</tr>
<tr>
<td>12:21 - 12:24</td>
<td>P611</td>
<td>Chronotypes differ influence in the weekday/weekend variability of pain in patients with fibromyalgia</td>
<td>S.-C. Fang (Taipei, TW)</td>
</tr>
<tr>
<td>12:24 - 12:27</td>
<td>P612</td>
<td>Chronotypes differ influence in the weekday/weekend variability of pain in patients with fibromyalgia</td>
<td>S.-C. Fang (Taipei, TW)</td>
</tr>
<tr>
<td>12:30 - 12:33</td>
<td>P614</td>
<td>Investigation of sleep structure with polysomnography in the patients with first episode psychosis</td>
<td>E. Kizilay (Ankara, TR)</td>
</tr>
<tr>
<td>12:33 - 12:36</td>
<td>P615</td>
<td>Phase advance jet lag disorder: results of the JET study</td>
<td>M.A. Fisher (Washington, DC, US)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P616</td>
<td>A proposal of circadian markers and indexes for the study of chronodisruption in sleep and circadian pathologies</td>
<td>C. Estivill-Domènech (Barcelona, ES)</td>
</tr>
<tr>
<td>12:39 - 12:42</td>
<td>P617</td>
<td>Sleep structure and awakening threshold in delayed sleep-wake phase disorder (DSWPD)</td>
<td>T. Sand (Trondheim, NO)</td>
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<tr>
<td>12:42 - 12:45</td>
<td>P618</td>
<td>Comparisons of subjective and actigraphic measurements of sleep between shift-working and daytime psychiatric nurses</td>
<td>B.-H. Yoon (Naju, Jeonnam, KR)</td>
</tr>
<tr>
<td>12:45 - 12:48</td>
<td>P619</td>
<td>A new monitoring tool for detecting human circadian rhythms: a mathematical approach using a thoracic temperature sensor</td>
<td>A. Chkeir (Troyes, FR)</td>
</tr>
<tr>
<td>12:48 - 12:51</td>
<td>P620</td>
<td>A new monitoring tool to detect an irregular Sleep-Wake circadian rhythm based on the automatic dichotomy index computation</td>
<td>R. Soubra (Troyes, FR)</td>
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<td>Time</td>
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<tr>
<td>12:00 - 13:00</td>
<td>Learning, memory and cognition 3</td>
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</table>
| 12:00 - 12:03 | P621 The relationship of stimulus emotionality to sleep-dependent memory consolidation: Testing contrasting theories using memory for negative, neutral and positive emotionally-toned photographs and stories  
M. Blagrove (Swansea, UK) |
| 12:03 - 12:06 | P622 The impact of memory strength for sleep-dependent memory consolidation  
D.P.J. Heib (Salzburg, Salzburg, AT) |
| 12:06 - 12:09 | P623 Academic performance, sleep duration and chronotype in Korean adolescents  
J.H. Kim (Cheonan, SEOUL, KR) |
| 12:09 - 12:12 | P624 Are prenatally learned nursery rhymes recognized at birth? A high-density EEG study  
M. Schabus (Salzburg, AT) |
| 12:12 - 12:15 | P625 Gross motor adaptation benefits from NREM2 sleep and fast spindle activity during nocturnal sleep after training  
K. Hoedlmoser (Salzburg, AT) |
| 12:15 - 12:18 | P626 Subjectively defined optimal/non-optimal time of day modulates controlled but not automatic retrieval processes in verbal memory  
P. Peigneux (Bruxelles, BE) |
| 12:18 - 12:21 | P627 Obstructive sleep apnea and non-invasive ventilation treatment-related effects on semantic memory integration in a false memory generation paradigm  
P. Peigneux (Bruxelles, BE) |
| 12:21 - 12:24 | P628 Clustered and temporally organised occurrence of NREM-stage2 sleep spindles mediates motor memory consolidation  
A. Boutin (Montreal, QC, CA) |
| 12:24 - 12:27 | P629 Split sleep is superior to consolidated nocturnal sleep for memory retention in sleep restricted adolescents  
E. van Rijn (Singapore, SG) |
| 12:27 - 12:30 | P630 Phase amplitude coupling facilitates pre-post-sleep consolidation of declarative and but not of procedural memories  
C. Mikutta (Bern, Bern, CH) |
| 12:30 - 12:33 | P631 Sleep and memory consolidation of reward-motivated encoding  
E. van Rijn (Singapore, SG) |
| 12:33 - 12:36 | P632 The effect of sex hormones on sleep and cognitive performance  
K. Hoedlmoser (Salzburg, AT) |
Scientific Programme

Friday, 28 September 2018

12:00 - 13:00

Poster Session, Poster, Poster Exhibition

Sleep deprivation 2

Chairs

T. DeBoer (Leiden, NL)

12:00 - 12:03

P633

Poor housing quality is associated with short sleep duration in New Zealand

T.L. Signal (Wellington, NZ)

12:03 - 12:06

P634

Sleep-wake dependent changes in molecular markers of synaptic plasticity in humans: a PET/MRS study

S. Weigend (Zürich, CH)

12:06 - 12:09

P635

On the high levels of delta power after prolonged wakefulness: reflection of a continuous process or a discrete NREM sleep sub-state?

J. Hubbard (Lausanne, CH)

12:09 - 12:12

P636

Working memory performance is better maintained in older compared with young adults after sleep deprivation

A. Gerhardsson (Stockholm, SE)

12:12 - 12:15

P637

Mood impairment is less strong in older than in young adults after sleep deprivation

A. Gerhardsson (Stockholm, SE)

12:15 - 12:18

P638

Oculomotoric evidence for a speed-accuracy trade-off in selective attention tasks during sleep deprivation

C. Mühl (Cologne, DE)

12:18 - 12:21

P639

Exploring the effect of 24-h sleep deprivation on social decision-making

C. Li (Hong Kong, HK)

12:21 - 12:24

P640

Theta and alpha oscillatory activity changes during visual and auditory cognitive tasks after sleep deprivation

S. Montamat (Geneva, CH)

12:24 - 12:27

P641

Sleep deprivation impairs social memory

T. Sundelin (Stockholm, SE)

12:27 - 12:30

P642

Investigation of the possible effects of the BDNF Val66Met polymorphism on the sleep EEG in a large, homogenous sample

D.M. Baur (Zürich, CH)

12:30 - 12:33

P643

Excessive daytime sleepiness and occupational accidents among resident doctors in Kocaeli city

U. Urgan (Kocaeli, TR)

12:33 - 12:36

P644

Sleep loss in shift-working long-haul truck drivers

J. Onninen (Jyväskylä, FI)

12:36 - 12:39

P645

A questionnaire study on sleep-wake pattern and sleep quality in TMJ & orofacial pain clinic

S. Kim (Seoul, KR)
Scientific Programme

Friday, 28 September 2018

12:39 - 12:42  P646  Neural network recognition of drowsiness using EEG
O. Tkachenko (Moscow, RU)

12:42 - 12:45  P647  Sleep quality of first year vs. sixth year medical students from the State University of Medicine and Pharmacy of the Republic of Moldova
A. Lupușor (Chisinau, MD)

12:45 - 12:48  P648  Selective slow-wave sleep suppression affects glucose tolerance and melatonin secretion
K. Liaukovich (Moscow, RU)

Poster Session, Poster, Poster Exhibition

12:00 - 13:00  Methodology & computation 3

Chairs
M. Cesari (Kgs. Lyngby, DK)

12:00 - 12:03  P649  Validation of the sleep assessment algorithm in the medical application Nightly and comparing it to polysomnography in 30 healthy individuals
A. Wichniak (Warsaw, PL)

12:03 - 12:06  P650  Gender differences in PSQI according to the main sleep disorders groups
C. Reis (Lisbon, PT)

12:06 - 12:09  P651  Comparison between polysomnography scoring of auto-analyzing software with trained technician
R. Heidari (Tehran, IR)

12:09 - 12:12  P652  Improved actigraphy-based sleep monitoring through optimal parameter tuning
F. Ryser (Zurich, CH)

12:12 - 12:15  P653  A smartphone based machine learning method for the fine characterization of snoring
D. Colas (Lyon, FR)

12:15 - 12:18  P654  If you’re sleepy and you know it, ...
B. Delwiche (Brussels, BE)

12:18 - 12:21  P655  Cardiac activity and wrist movements: SomnoArt a new technology to assess sleep architecture in healthy, depressed and insomniac patients
A. Viola (Colmar, FR)

12:21 - 12:24  P656  Correlation between the score of “STOP BANG” questionnaire and the severity of the OSA
S. Arbutina (Skopje, MK)

12:24 - 12:27  P657  Can smartphone sleep applications reliably assess sleep-wake cycle? Preliminary findings from a PSG study
E. Fino (Bologna, IT)
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12:27 - 12:30  P658  Does mattress zoning affect the biomechanics of sleep?
H. Shore (Preston, UK)

12:30 - 12:33  P659  Automatic human sleep stage scoring using Deep Neural Networks
A. Malafeev (Zurich, CH)

12:33 - 12:36  P660  Finding the ideal sleep solution: are you sleeping comfortably?
H. Shore (Preston, UK)

12:36 - 12:39  P661  Validation of Russian version of the dysfunctional beliefs about children's sleep scale
D. Kudryashov (Moscow, RU)

12:39 - 12:42  P662  Classification of obstructive sleep apnea with and without REM sleep behavior disorder based on convolutional neural network using cardiopulmonary coupling spectrogram
J.-U. Park (Wonju, KR)

12:42 - 12:45  P663  Activity monitor setup with two sensors
J. Virkkala (Helsinki, FI)

12:45 - 12:48  P664  The influence of between shift recovery duration and time of day on sleep: an analysis of 14 field actigraphy studies
R. Matthews (Stockholm, SE)

12:48 - 12:51  P665  A new tool for automatic detection of microsleeps during sleep restriction: validation in healthy volunteers
S. Takillah (Brétigny-sur-Orge, FR)

12:51 - 12:54  P666  Level of consciousness during anesthesia and sleep is indexed by the spectral scaling exponent of resting EEG
M. Colombo (Milan, IT)

12:54 - 12:57  P667  Representation of polysomnography recordings as low dimensional trajectories in latent space
G. Solelhac (Paris, FR)

12:00 - 13:00  Breathing disorders 5

Poster Session, Poster, Poster Exhibition

12:00 - 12:03  P668  Prevalence of reported excessive daytime sleepiness among Moroccan patients diagnosed with Obstructive sleep apnea-hypopnea syndrome and it's correlation with Epworth sleepiness scale
A. Jniene (Rabat, MA)

12:03 - 12:06  P669  Hypertension control in OSA - data from the European Sleep Apnea Database
S. Svedmyr (Gothenburg, SE)
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<tr>
<td>12:06 - 12:09</td>
<td>P670</td>
<td>Napping in patients with OSAHS is associated to diurnal fatigue</td>
<td>A. Jniene (Rabat, MA)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P671</td>
<td>Discrimination of hypopnea in everyday practice: is it worthwhile?</td>
<td>S. Correia (Porto, PT)</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P672</td>
<td>Contactless monitoring of breathing rate improves measurement robustness</td>
<td>M. Rullan (Basel, CH)</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P673</td>
<td>Catestatin serum levels in male patients with obstructive sleep apnea</td>
<td>J. Bozic (Split, HR)</td>
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<tr>
<td>12:18 - 12:21</td>
<td>P674</td>
<td>Depression associated to cardiovascular and/or metabolic comorbidities in Patients with obstructive sleep apnea-hypopnea syndrome</td>
<td>A. Jniene (Rabat, MA)</td>
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<tr>
<td>12:21 - 12:24</td>
<td>P675</td>
<td>Prevalence of sleep apnea syndrome in a cohort of acromegalic patients</td>
<td>S. Correia (Porto, PT)</td>
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<td>12:24 - 12:27</td>
<td>P676</td>
<td>The best formula for predicting cpap pressure? Have we any?</td>
<td>D. Rocha (Vila Real, PT)</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P677</td>
<td>Sleep apnea: before and after heart transplant</td>
<td>E. Matos (Vila Real, PT)</td>
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<tr>
<td>12:30 - 12:33</td>
<td>P678</td>
<td>Association of respiratory mechanic instability and respiratory parameters in adults with obstructive sleep apnea</td>
<td>J.H. Choi (Bucheon, KR)</td>
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<tr>
<td>12:33 - 12:36</td>
<td>P679</td>
<td>Investigation of KL-6, ET-1 and S100A9 levels in idiopathic pulmonary fibrosis (IPF) patients with Obstructive sleep apnea (OSA)</td>
<td>I. Bouloukaki (Heraklion, GR)</td>
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<tr>
<td>12:36 - 12:39</td>
<td>P680</td>
<td>Hypoglossal nerve stimulation for obstructive sleep apnea</td>
<td>S. Gradanska (Varna, BG)</td>
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<tr>
<td>12:39 - 12:42</td>
<td>P681</td>
<td>Comparison between auto-trilevel and bilevel positive airway pressure ventilation for treatment of obesity hypoventilation syndrome patients</td>
<td>X. Zhang (Nanjing, CN)</td>
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<tr>
<td>12:42 - 12:45</td>
<td>P682</td>
<td>Snoring causes OSA: sensory nervous lesions in the palate worsen over time in untreated snorers but not in CPAP-treated patients</td>
<td>E. Svanborg (Linköping, SE)</td>
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<tr>
<td>12:45 - 12:48</td>
<td>P683</td>
<td>First successful mechanical splint for OSA with an orally administrable pharyngeal stenting device</td>
<td>D. Neu (Brussels, BE)</td>
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<tr>
<td>12:51 - 12:54</td>
<td>P685</td>
<td>Using prediction formulas for continuous positive airway pressure in obstructive sleep apnea syndrome</td>
<td>A. Rahimi-Golkhandan (Tehran, IR)</td>
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**12:00 - 13:00**  
**Breathing disorders 6**

**Chairs**  
P. Jønnum (Glostrup, DK)

**12:00 - 12:03**  
P686  
Characterization of patients with OSAS and nocturnal desaturation  
D. Ferreira (Vila Nova de Gaia, PT)

**12:03 - 12:06**  
P687  
Rapid Eye Movement-related obstructive sleep apnea: comparison between two definitions  
D. Ferreira (Vila Nova de Gaia, PT)

**12:06 - 12:09**  
P688  
Outcomes in home sleep testing in patients with high pre-test probability for obstructive sleep apnoea  
K. Ziherl (Golnik, SI)

**12:09 - 12:12**  
P689  
SPECT study in different subgroups of sleep related breathing disorders  
Z. Szakacs (Budapest, HU)

**12:12 - 12:15**  
P690  
Prevalence of sleep apnea syndrome in patients with stroke history  
P. Caseiro (Coimbra, PT)

**12:15 - 12:18**  
P691  
Obstructive sleep apnea syndrome and type II diabetes: effects of non-invasive ventilation in Hemoglobin A1c values  
P. Caseiro (Coimbra, PT)

**12:18 - 12:21**  
P692  
Comparison of sleep instability indices in normal individuals and patients with severe obstructive sleep apnea  
P. Petrov (Sofia, BG)

**12:21 - 12:24**  
P693  
Persistence of periodic breathing/Cheyne-Stokes respiration after tilt table test during short term respiratory monitoring in patients with systolic heart failure  
C. Borrelli (Pisa, PI, IT)

**12:24 - 12:27**  
P694  
Prevalence of signs and symptoms of sleep apnea in Portuguese adult population  
P. Caseiro (Coimbra, PT)

**12:27 - 12:30**  
P695  
Prevalence of sleep apnea syndrome (SAS) in patients with implantable cardiac electronic devices  
M.J. Guimarães (Guimarães, PT)

**12:30 - 12:33**  
P698  
Gender differences in obstructive sleep apnea patients  
D. Ferreira (Vila Nova de Gaia, PT)

**12:33 - 12:36**  
P699  
Montreal cognitive assessment versus mini-mental state examination scales for cognitive impairments in obstructive sleep apnea-hypopnea syndrome patients with and without morning headache  
A. Lupușor (Chisinau, MD)

**12:36 - 12:39**  
P700  
Sleep apnea syndrome screening and and diagnosis among public transport (bus) drivers in Hungary  
A. Terray-Horváth (Budapest, HU)
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12:39 - 12:42 P701  Obstructive sleep apnoea as a risk factor for incident metabolic syndrome: a multicentric prospective epidemiological study
C. Hirotsu (Lausanne, CH)

12:00 - 13:00 Insomnia 4

12:00 - 12:03 P702  A clinical portrait of patients treated at the Université Laval Sleep Clinic
A. Vallières (Québec, QC, CA)

12:03 - 12:06 P703  Polysomnographical effects of on-line cognitive behavioral therapy for insomnia
P. D’Onofrio (Stockholm, SE)

12:06 - 12:09 P704  Cognitive behavior therapy for insomnia - is sleep compression an equally effective and less difficult alternative compared to sleep restriction?
A. Rosén (Stockholm, SE)

12:09 - 12:12 P705  One and ten-year follow-up of insomnia severity after a randomized trial of behavioral self-help treatment for insomnia with or without therapist guidance
S. Jernelöv (Solna, SE)

12:12 - 12:15 P706  Chronotype and psychiatric comorbidity in patients with insomnia referred to sleep disorders center
E. Poradowska (Warsaw, PL)

12:15 - 12:18 P707  Mediating effects of somatic symptoms in the association between sleep disturbance and mental health following Qigong exercise in a RCT
J.S. Chan (Hong Kong, CN)

12:18 - 12:21 P708  Do really chronic sleeping pills users develop tolerance to the drugs?
A. Green (Tel Aviv, IL)

12:21 - 12:24 P709  The relationship between anxiety, chronotype, melatonin onset and sleep on depression symptoms in insomnia
C. Gordon (Camperdown, AU)

12:24 - 12:27 P710  Insomnia in primary care: a survey conducted on the Italian population older than 50 years. Results from the “Sonno e Salute” study
P. Proserpio (Milan, IT)

12:27 - 12:30 P711  Risk of herpes simplex virus infection among patients with insomnia: a retrospective cohort study
H.-C. Wu (Taoyuan, TW)
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<tr>
<td>12:30 - 12:33</td>
<td>P712</td>
<td>A phase 1/2 double-blind, placebo-controlled study of SAGE-217 in an insomnia model</td>
<td>A. Bullock (Cambridge, MA, US)</td>
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<tr>
<td>12:33 - 12:36</td>
<td>P713</td>
<td>Physical activity and insomnia: an international perspective</td>
<td>I. Hartescu (Loughborough, UK)</td>
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<tr>
<td>12:39 - 12:42</td>
<td>P715</td>
<td>The comparison research of effects of neurofeedback and cognitive behavior treatment for insomnia patients</td>
<td>C. Sungwon (Seoul, KR)</td>
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<tr>
<td>12:42 - 12:45</td>
<td>P716</td>
<td>The effects of neurofeedback in fibromyalgia: a randomized controlled study</td>
<td>Y.L. Wu (Taipei, TW)</td>
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<tr>
<td>12:45 - 12:48</td>
<td>P717</td>
<td>Comparison of sleep related factors in clinic clients with and without sleep difficulty complaints</td>
<td>W.-C. Liao (Taichung, TW)</td>
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<tr>
<td>12:48 - 12:51</td>
<td>P718</td>
<td>Association of chronotype with sleep and alertness in nurses under fixed shift</td>
<td>C.-P. Kuo (Taichung, TW)</td>
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<tr>
<td>12:51 - 12:54</td>
<td>P719</td>
<td>The paradoxes of sleep state misperception and of paradoxical insomnia: a search for an evidence-based definition</td>
<td>A. Castelnovo (Lugano, CH)</td>
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**Poster Session, Poster, Poster Exhibition**

**Parasomnias**

**Chairs**
L. Nobili (Milan, IT)

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<tr>
<td>12:00 - 12:03</td>
<td>P720</td>
<td>Screening for idiopathic REM sleep behavior disorder: usefulness of actigraphy</td>
<td>A. Stefani (Innsbruck, AT)</td>
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<tr>
<td>12:03 - 12:06</td>
<td>P721</td>
<td>Altered heartbeat-evoked potential amplitude in nightmare disorder</td>
<td>L. Perogamvros (Chêne-Bourg, CH)</td>
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<td>12:06 - 12:09</td>
<td>P722</td>
<td>Imagery rescripting and imaginal exposure for nightmares: efficacy and mechanisms of change</td>
<td>J. Lancee (Amsterdam, NL)</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P723</td>
<td>Validation of the Dutch translation of the Paris Arousal Disorder Severity Scale in a one-year and one-month version</td>
<td>P. van Mierlo (Heeze, NL)</td>
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12:12 - 12:15  P724  Idiopathic REM sleep behavior disorder - symptoms of prodromal synucleinopathy and their relation to the degeneration of nigrostriatal pathway
K. Šonka (Prague, CZ)

12:15 - 12:18  P725  Influence of NREM parasomnia on daytime functioning, sleep quality, psychological health and quality of life in patients and bed partners
M. Docksey (London, UK)

12:18 - 12:21  P726  Impaired visuo-spatial abilities in REM sleep behaviour disorder are detected by the qualitative scoring of the Mini-Mental State Examination Pentagon Test
G. Carli (Milan, IT)

12:21 - 12:24  P727  A visual search task reveals an impaired visual processing in RBD patients
A. Galbiati (Milan, IT)

12:24 - 12:27  P728  Disease duration rather than aging is a key predicting factor for covert progress of neurodegeneration in patients with rapid eye movement sleep behavior disorder
Y. Sumi (Otsu, Shiga, JP)

12:27 - 12:30  P729  The utility of polysomnography in NREM parasomnias: a large cohort retrospective study
V. Gnoni (London, UK)

12:30 - 12:33  P730  Treatment approach in patients with NREM parasomnias: a large cohort retrospective study of 512 patients
P. Drakatos (London, UK)

12:33 - 12:36  P731  The "RBD Rating Scale" (RBD-RS): description and validation of a new instrument to measure manifestation and change of RBD symptoms over time
S. Wisniewski (Berlin, Berlin, DE)

12:36 - 12:39  P732  Somnambulism and environmental factors
W. Jernajczyk (Warsaw, PL)

12:39 - 12:42  P733  Effects of melatonin in idiopathic REM-sleep behavior disorder develop over time and are outlasting
D. Kunz (Berlin, DE)

12:42 - 12:45  P734  A simplified efficient scoring method to quantify REM sleep without atonia
F.W. Bes (Berlin, DE)

12:45 - 12:48  P735  Sleep stage and time of occurrence of minor and major motor episodes differentiate disorders of arousal from Sleep-Related Hypomotor Epilepsy
P. Proserpio (Milan, IT)
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12:48 - 12:51  P736  REM sleep behavior disorder and other sleep disturbances in dementia with Lewy bodies
J. Santamaria (Barcelona, ES)

12:51 - 12:54  P737  Nightmares and stress: a longitudinal study
M. Schredl (Mannheim, DE)

12:54 - 12:57  P738  Do patients affected by isolated REM sleep behavior disorder present a specific brain [18F]FDG PET pattern?
C. Liguori (Rome, IT)

12:00 - 13:00  Movement disorders

12:00 - 12:03  P739  REM sleep-related neck myoclonus, physiological phenomenon or parasomnia?
R. Lopez (Montpellier, FR)

12:03 - 12:06  P740  The Grand Total EEG score changes with the course of idiopathic REM sleep behavior disorder.
K. Tanioka (Kyoto, JP)

12:06 - 12:09  P741  Periodic limb movements during sleep in stroke/transient ischemic attack: prevalence, course and cardiovascular burden
M. Manconi (Lugano, CH)

12:09 - 12:12  P742  Restless legs syndrome is associated with arterial stiffness and clinical outcomes in acute stroke patients
S.-H. Han (Seoul, KR)

12:12 - 12:15  P743  Correlations of use of antidepressants, hypnotics and anti-histaminics with occurrence of clinically significant periodic limb movement in polysomnographically assessed abnormal fatigue and insomnia
A. Mariman (Gent, BE)

12:15 - 12:18  P744  3D detection of leg movements associated with arousals
M. Gall (Vienna, AT)

12:18 - 12:21  P745  Soluble transferrin receptor blood test as a measure of iron status in the study of restless legs syndrome in blood donors
L. Lillo Triguero (Madrid, Madrid, ES)

12:21 - 12:24  P746  Comparing objective and subjective measurements of excessive daytime sleepiness in patients with significant periodic limb movements of sleep (PLMS)
S. Delis Gómez (Madrid, ES)
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<td>12:24 - 12:27</td>
<td>P747</td>
<td>The role of vitamin D supplementation in Willis/Ekbom, Restless Leg Syndrome (WES/RLS). A new therapeutic option to improve symptoms and augmentation</td>
<td>R. Silvestri (Messina, IT)</td>
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<td>12:27 - 12:30</td>
<td>P748</td>
<td>Autonomic nervous system dysfunction during the suggested immobilization test in restless legs syndrome</td>
<td>A. Rassu (Montpellier, FR)</td>
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<td>12:30 - 12:33</td>
<td>P749</td>
<td>Frequent association of central nervous system disorders in patients with periodic limb movements during rapid eye movement sleep</td>
<td>A. Barros (Lisboa, PT)</td>
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<td>12:33 - 12:36</td>
<td>P750</td>
<td>Restless leg syndrome effect on heart rate variability, is it real?</td>
<td>E. Dongol (Qena, EG)</td>
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<td>12:39 - 12:42</td>
<td>P752</td>
<td>Head jerk during REM sleep: healthy motor event or movement disorder?</td>
<td>M. Kohsaka (Sapporo, JP)</td>
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<td>12:42 - 12:45</td>
<td>P753</td>
<td>Rocking bed therapy for sleep related rhythmic movement disorder: movement preference and acceptability in six children</td>
<td>R.M. van Sluijs (Zürich, CH)</td>
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<td>12:45 - 12:48</td>
<td>P754</td>
<td>Multisensor data fusion algorithm for sleep quality estimation using multiple measurements</td>
<td>T. Guettari (Troyes, FR)</td>
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<td>12:51 - 12:54</td>
<td>P756</td>
<td>Prevalence of restless legs syndrome (RLS) in the general population</td>
<td>T. Sand (Trondheim, NO)</td>
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<td>12:54 - 12:57</td>
<td>P757</td>
<td>Asymmetry of periodic leg movements in sleep (PLMS) in Parkinson's disease</td>
<td>W. Hermann (Dresden, DE)</td>
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<td>12:00 - 13:00</td>
<td>Medical disorders 2</td>
<td>A simple measurement of cardiac output using blood circulating time can faithfully reflect changes in cardiac condition in patients with sleep apnea and cardiac diseases</td>
<td>T. Tobushi (Chikushino, JP)</td>
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<td>12:03 - 12:06</td>
<td>P528</td>
<td>Assessment of sleep quality in patients with Idiopathic pulmonary fibrosis</td>
<td>E. Nena (Alexandroupolis, GR)</td>
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<td>12:06 - 12:09</td>
<td>P529</td>
<td>Nearly 1 in 5 patients with stroke could have undiagnosed OSA that could impact their recovery</td>
<td>S. Sultan Khawaja (Nottingham, UK)</td>
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<td>12:09 - 12:12</td>
<td>P530</td>
<td>Sleep during naturally occurring acute respiratory infections (ARIs)</td>
<td>J. Axelsson (Stockholm, SE)</td>
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<td>12:12 - 12:15</td>
<td>P531</td>
<td>Obstructive sleep apnea (OSA) and rhinitis: literature review and personal experience</td>
<td>A. Bucci (Senigallia (AN), IT)</td>
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<td>12:15 - 12:18</td>
<td>P532</td>
<td>Agreement study of general sleep quality within infertile couples</td>
<td>A. Najafi (Tehran, IR)</td>
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<td>12:21 - 12:24</td>
<td>P534</td>
<td>Self-reported insomnia and subclinical carotid atherosclerosis: is there a relation?</td>
<td>L. Korostovtseva (St Petersburg, RU)</td>
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<td>12:24 - 12:27</td>
<td>P535</td>
<td>Sleep/wake cycle patterns in adolescence relate to alterations in cardiovascular and metabolic health in early adulthood</td>
<td>C. Algarin (Santiago, Region Metropolitana, CL)</td>
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<td>12:27 - 12:30</td>
<td>P536</td>
<td>Examining the relationship between sleep disturbance and daytime variables in psoriasis using actigraphy and experience sampling methodology</td>
<td>A. Henry (Manchester, UK)</td>
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<tr>
<td>12:30 - 12:33</td>
<td>P537</td>
<td>Cardiorespiratory effects of indoor air quality during sleep</td>
<td>M. Meira e Cruz (Lisboa, PT)</td>
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<td>12:33 - 12:36</td>
<td>P538</td>
<td>Increased risk of sleep disorder in burn patients: a nationwide, population-based cohort study</td>
<td>C.-Y. Liang (Taipei, TW)</td>
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<td>12:36 - 12:39</td>
<td>P539</td>
<td>Self-reported and actigraphic sleep quality in female patients with fibromyalgia and healthy controls</td>
<td>C. Violani (Rome, IT)</td>
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<tr>
<td>12:39 - 12:42</td>
<td>P540</td>
<td>Independent association between severe obstructive sleep apnea and liver stiffness</td>
<td>W. Trzepizur (Angers, FR)</td>
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<td>12:42 - 12:45</td>
<td>P541</td>
<td>The impact of obesity on morning headaches in OSAS patients</td>
<td>A. Lupușor (Chisinau, MD)</td>
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<td>12:45 - 12:48</td>
<td>P542</td>
<td>The antihypertensive effect of continuous positive airway pressure therapy for patients with obstructive sleep apnea and resistant hypertension: telephone survey</td>
<td>G. Vaitukaitienė (Kaunas, LT)</td>
</tr>
</tbody>
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Scientific Programme

Friday, 28 September 2018

12:00 - 13:00  
**Psychiatric & behavioral disorders 3**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 - 12:03</td>
<td>The influence of anticipatory stress on sleep - preliminary results from an experience sampling method study</td>
<td>V. Firsching (Basel, CH)</td>
</tr>
<tr>
<td>12:03 - 12:06</td>
<td>Misperception of sleep patterns and memory experience gap among patients with major depressive disorders, and social anxiety, and healthy controls</td>
<td>T. Mikoteit (Solothurn, CH)</td>
</tr>
<tr>
<td>12:06 - 12:09</td>
<td>Poor sleep quality and depressive symptoms in young adults</td>
<td>M. Gonçalves (Porto, PT)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>Sleep-related heart rate changes in people with depression: potential for a novel multi-systemic biomarker</td>
<td>M. Saad (Ottawa, ON, CA)</td>
</tr>
<tr>
<td>12:12 - 12:15</td>
<td>Sleep architecture in adolescents hospitalized during a suicidal crisis</td>
<td>R. Robillard (Ottawa, ON, CA)</td>
</tr>
<tr>
<td>12:15 - 12:18</td>
<td>Effect of continuous positive airway pressure on neuropsychiatric characteristics of adherent and non-adherent OSA patients</td>
<td>V. Dostálová (Praha, CZ)</td>
</tr>
<tr>
<td>12:18 - 12:21</td>
<td>Investigation of sleep structure with polysomnography in the patients with first episode psychosis</td>
<td>E. Kızılay (Ankara, TR)</td>
</tr>
<tr>
<td>12:21 - 12:24</td>
<td>Traumatic experiences influence later sleep and stress perception in vulnerable individuals</td>
<td>Y. Azza (Zurich, CH)</td>
</tr>
<tr>
<td>12:24 - 12:27</td>
<td>Sleep spindles and depressive symptoms in post-traumatic stress disorder</td>
<td>R. Robillard (Ottawa, ON, CA)</td>
</tr>
<tr>
<td>12:27 - 12:30</td>
<td>Social rhythms and the sleep-wake cycle in young people with depression</td>
<td>A. Nixon (Ottawa, ON, CA)</td>
</tr>
<tr>
<td>12:30 - 12:33</td>
<td>Temperament, character and personality in in patients with panic disorder and sleep disorder: personality and sleep</td>
<td>C. Cimmino (Piedimonte Matese, Caserta, IT)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>The influence of depressive symptoms and physical illness on sleep disturbance in elderly people</td>
<td>B. Nam (Chungju, KR)</td>
</tr>
<tr>
<td>12:39 - 12:42</td>
<td>The relationship between obstructive sleep apnea and depression</td>
<td>M. Li (Changchun, CN)</td>
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**Friday, 28 September 2018**

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<tbody>
<tr>
<td>12:42 - 12:45</td>
<td>P557</td>
<td>Social responsiveness in pediatric narcolepsy patients</td>
<td>L. Quaedackers (Heeze, NL)</td>
</tr>
<tr>
<td>12:45 - 12:48</td>
<td>P558</td>
<td>A novel home video behaviour analysis algorithm to diagnose childhood chronic insomnia</td>
<td>L. Galbraith (Southampton, UK)</td>
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**12:00 - 13:00**

**Paediatrics 2**

**Chairs**

S. Kurth (Zurich, CH)

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<th>Time</th>
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<tbody>
<tr>
<td>12:00 - 12:03</td>
<td>P559</td>
<td>Sleep and daytime functioning in children with autism</td>
<td>A. Geranmayeh (Stockholm, SE)</td>
</tr>
<tr>
<td>12:03 - 12:06</td>
<td>P560</td>
<td>Weekday-weekend sleep variations in young children and the associated family factors</td>
<td>L. Xiu (Stockholm, SE)</td>
</tr>
<tr>
<td>12:06 - 12:09</td>
<td>P561</td>
<td>Sleep duration and socio-economic status in pediatric population: a systematic review of the literature</td>
<td>O. Guglielmi (Genoa, Italy, IT)</td>
</tr>
<tr>
<td>12:09 - 12:12</td>
<td>P562</td>
<td>Treatment of symptoms of depression with light goggles in adolescents</td>
<td>A. Lowden (Stockholm, SE)</td>
</tr>
<tr>
<td>12:12 - 12:15</td>
<td>P563</td>
<td>When the children don’t sleep: the impact on paternal mental health</td>
<td>M. Gardani (Glasgow, UK)</td>
</tr>
<tr>
<td>12:15 - 12:18</td>
<td>P565</td>
<td>Sleep habits in a western Mediterranean population from 0 to 30 months: a cohort study</td>
<td>A. Gamundí (Palma de Mallorca, Illes Balears, ES)</td>
</tr>
<tr>
<td>12:18 - 12:21</td>
<td>P568</td>
<td>Psychological factors of sleep disorders in school-age children: the role of parent’s subjective sleep problems and dysfunctional beliefs about their child’s sleep</td>
<td>D. Kudryashov (Moscow, RU)</td>
</tr>
<tr>
<td>12:21 - 12:24</td>
<td>P569</td>
<td>Cataplexy and sleep disorders in Niemann-Pick type C disease - a case study</td>
<td>B. Gnidovec Strazisar (Celje, SI)</td>
</tr>
<tr>
<td>12:27 - 12:30</td>
<td>P571</td>
<td>Temperament and sleep in children: investigation of the direction of the association</td>
<td>L. Bastien (Montréal, QC, CA)</td>
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<tbody>
<tr>
<td>12:30 - 12:33</td>
<td>P573</td>
<td>Relationship between sleep and health-related factor in adolescents</td>
<td>K.J. Hwang (Seoul, KR)</td>
</tr>
<tr>
<td>12:33 - 12:36</td>
<td>P574</td>
<td>Our experience in treatment sleep apnea in children</td>
<td>P. Petrov (Sofia, BG)</td>
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**Poster Session, Poster, Poster Exhibition**

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<tbody>
<tr>
<td>12:00 - 12:03</td>
<td>P575</td>
<td>Effect of gender, obesity and neck circumference on the severity of</td>
<td>A. Gharib (Cairo, EG)</td>
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<tr>
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<td>obstructive sleep apnea in Egyptian patients</td>
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<tr>
<td>12:03 - 12:06</td>
<td>P576</td>
<td>A study of physical activity, sleep and mood in Finnish adolescents</td>
<td>M. Heath (Adelaide, SA, AU)</td>
</tr>
<tr>
<td>12:06 - 12:09</td>
<td>P577</td>
<td>Sleep related symptoms and gender in France: an analysis of the Reseau</td>
<td>S. Royant-Parola (Garches, FR)</td>
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<td>Morphee database</td>
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<tr>
<td>12:09 - 12:12</td>
<td>P578</td>
<td>Gender differences in aging process of sleep behavior: the Korean</td>
<td>H.J. Kim (Seoul, KR)</td>
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<td>Genome and Epidemiology Study</td>
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<tr>
<td>12:12 - 12:15</td>
<td>P579</td>
<td>Subjective sleep quality, fatigue and depressive symptoms during and</td>
<td>L. Moons (Gent, BE)</td>
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<td>after pregnancy</td>
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<tr>
<td>12:15 - 12:18</td>
<td>P580</td>
<td>Breastfeeding, prolactin release and sleep</td>
<td>J. Isaac (Beja, PT)</td>
</tr>
<tr>
<td>12:18 - 12:21</td>
<td>P581</td>
<td>Relation between menstrual cycle, sleep and daytime sleepiness</td>
<td>J. Miura (Sapporo, JP)</td>
</tr>
<tr>
<td>12:21 - 12:24</td>
<td>P582</td>
<td>Gender differences of cardiovascular risk in population with sleep</td>
<td>D. Panov (Novosibirsk, RU)</td>
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<td>disturbance in Russia / Siberia: WHO program MONICA-psychosocial</td>
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<tr>
<td>12:24 - 12:27</td>
<td>P583</td>
<td>Is use of systemic hormone therapy associated with better sleep? A</td>
<td>R. Andenæs (Oslo, NO)</td>
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<td>large, registry-based study of pre-, peri- and post-menopausal women</td>
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<td>in Norway</td>
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<tr>
<td>12:27 - 12:30</td>
<td>P584</td>
<td>„What about us?“ Men in the face of childbirth - their sleep and</td>
<td>B.G. Cattarius</td>
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<td></td>
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<td>experiences of stress around the time of birth</td>
<td>(Bielefeld, Nordrhein-Westfalen, DE)</td>
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### Scientific Programme

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</thead>
<tbody>
<tr>
<td>12:30 - 12:33</td>
<td>P587</td>
<td>A big data approach to objective measurement of sex differences in sleep schedules</td>
<td>K. Martinmäki (Kempele, FI)</td>
</tr>
<tr>
<td>12:33 - 12:36</td>
<td>P588</td>
<td>Sex differences in the circadian and sleep dependent regulation of sleep spindles in humans</td>
<td>A. Lazar (Norwich, Norfolk, UK)</td>
</tr>
<tr>
<td>12:36 - 12:39</td>
<td>P589</td>
<td>What are the characteristics associated with increased slow wave sleep?</td>
<td>A.R. Peralta (Lisboa, PT)</td>
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**Poster Session, Poster, Poster Exhibition**

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<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>13:00 - 13:30</td>
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<td><strong>Poster Session 3 - Poster viewing</strong></td>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>13:30 - 15:30</td>
<td></td>
<td><strong>Narcolepsy</strong></td>
<td></td>
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<tr>
<td>13:30 - 14:00</td>
<td>175</td>
<td>Is cataplexy a dissociated state of paradoxical (REM) sleep? Role of glutamatergic neurons of the sublaterodorsal nucleus in a mouse model of narcolepsy type 1</td>
<td>C. Peyron (Lyon, FR)</td>
</tr>
<tr>
<td>14:00 - 14:30</td>
<td></td>
<td>Narcolepsy and H1N1 influenza and vaccinations. Fakes and News.</td>
<td>E. Mignot (Palo Alto, US)</td>
</tr>
<tr>
<td>14:30 - 15:00</td>
<td></td>
<td>The 24-hour motor disorder of the childhood phenotype</td>
<td>G. Piazzzi (Bologna, IT)</td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td></td>
<td>Narcolepsy and autoantibodies. Lesson from the paraneoplastic forms</td>
<td>Y. Dauvilliers (Montpellier, FR)</td>
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Friday, 28 September 2018

13:30 - 15:30

Basic Track, Symposium, Montreal

Molecular and cellular mechanisms of sleep homeostasis

Understanding the molecular and cellular basis of sleep homeostasis has long been a goal of sleep researches. Beyond its importance in basic physiology, understanding sleep homeostasis in molecular and cellular level will provide a new therapeutic target in sleep disorders (e.g. insomnia). Although researchers investigated neuronal and biochemical nature of sleep regulation and revealed some sleep/wake-promoting nuclei and secreting substances, the detailed molecular and cellular mechanisms underlying the regulation of sleep amount per day and sleep homeostasis in mammals are still elusive. With the progress in the methods of genetics and neuroscience, several genes whose genetically engineered mice exhibit abnormality in sleep duration or sleep homeostasis have been identified in recent studies. Our objective in this symposium is to gather and integrate these studies, which would provide new insights into molecular or cellular mechanism of sleep homeostasis and shed light on the way to reveal the bona fide mechanism of sleep homeostasis. All invited speakers have a long-standing interest and expertise in the area of the molecular or cellular mechanism of the regulation of sleep amount per day or sleep homeostasis. They also have recently published high profile papers in which they have identified new molecular or cellular mechanism controlling sleep amount per day or sleep homeostasis. For example, Dr. Shoi Shi recently published a paper showing that the components of Ca²⁺-dependent hyperpolarization pathway play a role in sleep duration regulation in mammals. Dr. Steven Brown will present his research on a novel screening of sleep mutant in mammals. Dr. Michael Lazarus recently published a paper showing that a novel sleep circuit in the basal ganglia is under motivated behavior. Finally, Dr. Paul Franken will present his informative accumulated researches on molecular mechanisms of sleep homeostasis.

Chairs
H. Ueda (Tokyo, JP)
P. Franken (Lausanne, CH)

13:30 - 14:00 176

Ca²⁺-dependent hyperpolarization pathway in sleep homeostasis
S. Shi (Tokyo, JP)

14:00 - 14:30 [tentative]

Comprehensive RNAi screening in mammal revealed new sleep-related genes
S. Brown (Zurich, CH)

14:30 - 15:00 177

Long- and short-term molecular consequences of sleep loss in mice
P. Franken (Lausanne, CH)

15:00 - 15:30 178

The gating of sleep by motivated behavior
M. Lazarus (Ibaraki, JP)

Track Human Sleep, Oral Session, Sydney

13:30 - 15:30

Sleep in children and adolescents

Chairs
R. Huber (Zurich, CH)
K. Hoedlmoser (Salzburg, AT)
Scientific Programme

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<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>13:30 - 13:42</td>
<td>O179</td>
<td>Sleep mediates the association between school pressure, physical activity, screen-time and psychological distress in adolescents</td>
<td>K. Dhondt (Ghent, BE)</td>
<td></td>
</tr>
<tr>
<td>13:42 - 13:54</td>
<td>O180</td>
<td>Tracking infant development: Links between sleep-wake behavior and gut bacteria beta-diversity</td>
<td>S.F. Schoch (Zurich, CH)</td>
<td></td>
</tr>
<tr>
<td>13:54 - 14:06</td>
<td>O181</td>
<td>Sleep in infancy and its relation to the symptoms of attention-deficit and hyperactivity disorder at age 5 years: a longitudinal study</td>
<td>E.J. Paavonen (Helsinki, FI)</td>
<td></td>
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<tr>
<td>14:06 - 14:18</td>
<td>O182</td>
<td>Later school start times alleviate sleep deprivation and social jetlag in adolescent high school students</td>
<td>A.M. Biller (Munich, DE)</td>
<td></td>
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<tr>
<td>14:18 - 14:30</td>
<td>O183</td>
<td>Sleep-dependent memory consolidation in children with high-functioning autism spectrum disorder</td>
<td>K. Zinke (Tübingen, DE)</td>
<td></td>
</tr>
<tr>
<td>14:30 - 14:42</td>
<td>O185</td>
<td>Sleep-dependent memory consolidation enhancement from childhood to adolescence is related to developmental changes in sleep spindles and slow oscillations</td>
<td>M. Hahn (Salzburg, AT)</td>
<td></td>
</tr>
<tr>
<td>14:42 - 14:54</td>
<td>O186</td>
<td>During day and night: childhood psychotic-like experiences and nightmares</td>
<td>M.E. Koopman-Verhoeff (Rotterdam, NL)</td>
<td></td>
</tr>
<tr>
<td>14:54 - 15:06</td>
<td>O187</td>
<td>Slow wave activity topography predicts development of brain myelin in children</td>
<td>S. Kurth (Zurich, CH)</td>
<td></td>
</tr>
<tr>
<td>15:06 - 15:18</td>
<td>O188</td>
<td>Beneficial effects of a lifestyle intervention program on C-reactive protein: impact of cardiorespiratory fitness in obese adolescents with sleep-related disorders</td>
<td>J. Roche (Besançon, FR)</td>
<td></td>
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Track Human Sleep, Oral Session, Singapore

13:30 - 15:30

**Sleep in aging and dementia**

**Chairs**

G. Vandewalle (Liege, BE)

N. Gosselin (Montreal, CA)
Scientific Programme

Friday, 28 September 2018

M. Deantoni (Liège, BE)

13:42 - 13:54 O190 Impact of intraocular cataract lens replacement on circadian rhythms and sleep in older adults
S. Chellappa (Boston, US)

13:54 - 14:06 O191 Pain, depression, dementia and their association with sleep in nursing home patients - a cross-sectional study
K.M. Blytt (Bergen, NO)

14:06 - 14:18 O192 Sleep, orexin and β-amyloid metabolism in obstructive sleep apnea syndrome and Alzheimer's disease
C. Liguori (Rome, IT)

14:18 - 14:30 O193 Arousals during sleep are associated with brain tau and amyloid-β burden in healthy older adults
D. Chylinski (Liège, BE)

14:30 - 14:42 O194 Sleep efficiency and electroencephalographic patterns in midlife are associated with cognitive change over the adult life course
M. Waser (Kgs. Lyngby, DK)

14:42 - 14:54 O195 A polysomnographic sleep and resting state fMRI connectivity study in the general population
T.S. Lysen (Rotterdam, NL)

14:54 - 15:06 O196 Changes in slow waves density: a matter of aging and sex or an inaccurate detection?
T. Rosinvil (Montréal, QC, CA)

15:06 - 15:18 O197 Change in sleep duration at retirement: a longitudinal study using objective assessments
S. Gershagen (Stockholm, SE)

15:18 - 15:30 O198 Objectively measured sleep disturbances are associated with reduced microstructural integrity of white matter. A prospective cohort study in middle-aged and older persons
D. Kocevska (Rotterdam, NL)

Track General, Joint Symposium, Osaka

13:30 - 15:30 Joint Symposium ESRS - SSSSC

Chairs
W. McNicholas (Dublin, IE)
M. Hatzinger (Solothurn, CH)

13:30 - 14:00 Towards a neuroscience of insomnia
E. Van Someren (Amsterdam, NL)
### Scientific Programme

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<td>199</td>
<td>Dreaming and consciousness</td>
<td>F. Siclari (Lausanne, CH)</td>
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<td>14:30 - 15:00</td>
<td>200</td>
<td>Neuroimaging of sleep regulation circuits</td>
<td>K. Spiegelhalder (Freiburg, DE)</td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td></td>
<td>Sleep biomarkers in insomnia and depression</td>
<td>T. Mikoteit (Solothurn, CH)</td>
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<tr>
<td>15:45 - 17:15</td>
<td>Track General, Opening/Closing Session</td>
<td>Hot Topic Symposium &amp; Closing Session</td>
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<tr>
<td>15:45 - 16:05</td>
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<td>Hot Topic Symposium</td>
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<tr>
<td>16:05 - 16:25</td>
<td></td>
<td>Sleep duration and mortality - Does weekend sleep matter?</td>
<td>T. Åkerstedt (Stockholm, SE)</td>
</tr>
<tr>
<td>16:25 - 16:45</td>
<td></td>
<td>Quantitative phosphoproteomic analysis of the molecular substrates of sleep need</td>
<td>Q. Liu (Dallas, US)</td>
</tr>
<tr>
<td>16:45 - 16:55</td>
<td></td>
<td>ER lipid defects in neuropeptidergic neurons impair sleep patterns in Parkinson’s Disease</td>
<td>J.S. Valadas (Leuven, BE)</td>
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<td>Best poster award</td>
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