

UIUI HAŢIEGANU UNIVERSITY OF MEDICINE AND PHARMACY CLUJ-NAPOCA ROMANIA



# "IULIU HATIEGANU" UNIVERSITY OF MEDICINE AND PHARMACY DOCTORAL SCHOOL **NEUROSCIENCE** PROGRAM

2016-2017 | SECTION 4

FRIDAY, 24 FEBRUARY | UMF "IULIU HATIEGANU" | CLUJ-NAPOCA | ROMANIA





# PhD NEUROSCIENCE PROGRAM COORDINATOR



## Dafin F. Mureşanu

President of the Romanian Society of Neurology

Co-Chair EAN Scientific Panel Neurorehabilitation

Vice President European Federation of NeuroRehabilitation Societies (EFNR)

Professor of Neurology, Chairman Department of Neurosciences "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

Chairman "RoNeuro" Institute for Neurological Research and Diagnostic

President of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN)

# INTERNATIONAL GUEST LECTURER



## Claudio Bassetti

Vice-Dean, Medical Faculty, University Bern

Full Professor of Neurology and Chair, Neurology Department, University Hospital, Bern Switzerland

## PhD NEUROSCIENCE PROGRAM FACULTY 2016-2017

Jaroslaw Aronowski /USA Claudio Bassetti /Switzerland Natan Bornstein /Israel Michael Brainin / Austria Michael Chopp /USA Attila Csányi /Hungary László Csiba /Hungary Marc Fisher /USA Wolf Dieter Heiss /Germany Peter Jenner /UK Tudor Jovin /USA Maurizio Leone /Italy Dafin F. Mureșanu / Romania Dieter Meier /Germany Milija Mijajlovic /Serbia Maura Pugliatti /Italy Johannes Vester /Germany Gregory J. del Zoppo /USA

# ORGANIZER



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# **ACADEMIC PARTNERS**





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# **COURSE PROGRAM**

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## **FEBRUARY 24<sup>TH</sup>, 2017**

"MULTIMEDIA" AUDITORIUM, "IULIU HATIEGANU" UNIVERSITY OF MEDICINE AND PHARMACY CLUJ-NAPOCA, 8 VICTOR BABES STREET

- 09:50 10:00 Dafin F. Mureșanu /Romania Welcome Address
- 10:00 10:45 Claudio Bassetti /Switzerland Sleep and Neurology
- 10:45 11:30 Claudio Bassetti /Switzerland Sleep and Movement disorders
- 11:30 12:00 Coffee Break
- 12:00 12:45 Claudio Bassetti /Switzerland Sleep and Epilepsy
- 12:45 14:00 Session Break
- 14:00 14:45 Claudio Bassetti /Switzerland Sleep and Dementia
- 14:45 15:30 Claudio Bassetti /Switzerland Sleep and Stroke



## INTERNATIONAL GUEST LECTURER



## CLAUDIO BASSETTI SWITZERLAND

#### CURRICULUM

| 1985      | Medical degree (MD), University of Basel  |
|-----------|---|
| 1985-6    | Research fellowship (experimental neurophysiology), Physiology Dept., Basel       |
| 1988-1992 | Neurology residency, University Hospitals, Bern and Lausanne (FMH 1992)           |
| 1992-2001 | Attending physician, Neurology Dept., University Hospital (Inselspital), Bern     |
| 1995-6    | Research fellowship (sleep), Neurology Dept., Michigan UoM, Ann Arbor (USA)       |
| 1997      | Venia docendi (associate professor) in neurology, University of Bern              |
| 2001-2009 | Professor and Vice-Chair, Neurology Dept., University Hospital, Zurich            |
| 2009-2011 | Founder/1st Director, Neurocenter of Southern Switzerland, Lugano                 |
| 2012-     | Full Professor of Neurology and Chair, Neurology Dept., University Hospital, Bern |

#### EXPERTISE

| Clinically     | general neurology, sleep, stroke, movement disorders    |
|----------------|---|
| Scientifically | sleep and stroke, narcolepsy, human and animal research |

PUBLICATIONS (February 2017)

Articles: 365; Books: 8; Citation index 12'000; H-Index: 58

#### REPRESENTATIVE PUBLICATIONS

1) Bassetti C, Aldrich M, Chervin R, Quint D. Sleep apnea in patients with TIA and Stroke. A prospective study of 59 patients. Neurology 1996; 47: 1167-73

2) Bassetti C, Vella S, Donati F. SPECT during Sleepwalking. Lancet 2000; 356: 484-5

3) Khatami R, Maret S, Werth E, Rétey J, Schmid D, Maly F, Tafti M, Bassetti CL. A monozygotic twin pair concordant for narcolepsy-cataplexy without any detectable abnormality in the hypocretin pathway. Lancet 2004; 363: 1199-00

4) Schwartz S, Ponz A, Poryazova R, Werth E, Boesiger P, Khatami R, Bassetti CL. Abnormal activity in hypothalamus and amygdala during humour processing in human narcolepsy with cataplexy. Brain 2008; 131: 514-22

5) Hermann D, Bassetti. Role of sleep disordered breathing and sleep-wake distrubances for stroke and stroke recovery, Neurology 2016; 87: 1407-1416

6) Pace M, Adamantidis A, Facchin L, Bassetti C. Role of REM sleep, melanin concentratig hormon and orexin/ hypocretin systems in the sleep-depriavtion pre-ischemia. PLOSone 2017; DOI:10.1371/journal.pone.0168430

#### EDITORIAL ACTIVITIES

Chief editor Clinical and Translational Neurosciences

Deputy Editor European Neurology Associate Editor Sleep; Journal of Sleep Research; Sleep Medicine Editorial board Belgian Neurological Journal; Somnologie; Neurobiology of SleepCircadian Rhythms Memberships and awards 2008 Foreign Honorary Member, Belgian Neurological Society 2008 M. Aldrich Award, Ann Arbor, University of Michigan, USA 2008-12 President, Swiss Neurological Society (SNG) 2008-12 President, European Sleep Research Society (ESRS) 2009/2011 Dejerine Dubois Prize, Swiss Neurological Society 2010 Pisa Sleep Award 2009-13 Founder and 1st President, Swiss Federation of Clinical Neurosocieties (SFCNS) 2013-4 President, European Neurological Society (ENS) 2013- Board member, Swiss Academy of Medical Sciences (SAMW) 2015- Board member, Swiss Clinical Trials Organization (SCTO) 2015 Honorary Member, European Academy of Neurology 2015- Board Member, Swiss Heart Foundation 2016- Vice-Dean for Research, Medical Faculty, University of Bern



# ABSTRACTS

## **SLEEP AND NEUROLOGY**

CLAUDIO BASSETTI

Vice-Dean, Medical Faculty, University Bern Chairman and Head, Neurology Department, Inselspital, Bern University Hospital, Bern, Switzerland

Introduction: the main theories on the function of sleep (neuronal restoration/integrity <sup>1, 2</sup>; learning/memory consolidation <sup>3-5</sup>; energy saving/allocation <sup>6</sup>) and the principles of sleep staging/scoring and sleep-wake regulation are presented.

Sleep and neurology: the frequency of sleep-wake disturbances (SWD) in neurological patients and the overall impact of SWD on the course of neurological disorders is discussed. Important causes of "neurogenic" insomnia (e.g. restless legs syndrome, stroke, Creutzfeldt-Jakob disease, frontal lobe lesions, M. Alzheimer) hypersomnia (e.g. narcolepsy, stroke, Parkinsonism) and parasomnia (e.g. Parkinsonism) are presented <sup>7-12</sup>.

Diagnosis/management: history taking in patients with SWD, when to refer patients to specialized sleep centers and treatment options for neurogenic SWD are presented.

## **SLEEP AND MOVEMENT DISORDERS**

#### **CLAUDIO BASSETTI**

Vice-Dean, Medical Faculty, University Bern Chairman and Head, Neurology Department, Inselspital, Bern University Hospital, Bern, Switzerland

The vignette of a patient with a sleep related movement disorder (SRMD) is presented at the beginning, and its solution at the end of the lecture.

Introduction: the physiology of motor control in sleep and the variety of physiological sleep-associated motor activities are briefly discussed <sup>13, 14</sup>. The concept of "state dissociation" as pathophysiological principle of (most) SMD is presented <sup>15, 16</sup>.

Sleep-related complex movement disorders: sleepwalking and REM sleep behavior disorder are the most important complex SRMD <sup>17-21</sup>. The list of other SRMD is shortly discussed <sup>13,14,22</sup>.

Diagnosis/management: the diagnostic work-up and treatment options for patients with SRMD are discussed.

## **SLEEP AND EPILEPSY**

#### **CLAUDIO BASSETTI**

Vice-Dean, Medical Faculty, University Bern Chairman and Head, Neurology Department, Inselspital, Bern University Hospital, Bern, Switzerland

The vignette of a patient with a paoxysmal sleep-related episode is presented at the beginning, and its solution at the end of the lecture.

Introduction: the regulation of the thalamo-cortico-thalamic rhythms during the normal sleep-wake cycle and the role of NREM and REM sleep in epileptogenesis are briefly presented <sup>23-26</sup>. The concept of a "final comon" pathway of parasomnias and sleep-related epilepsies and the corresponding clinical manifestations is discusses <sup>27</sup>.

Sleep and epilepsy: the most important sleep-related epilepsy syndromes (including the so-called sleep hypermotor epilepsy, SHE) and sleep-epilepsy interactions are presented <sup>28, 29</sup>.

Diagnosis/management: the diagnostic work-up and treatment options for patients with sleep-related epilepsy and for those with detrimental sleep-epilepsy interactions are discussed <sup>30, 31</sup>.

## **SLEEP AND DEMENTIA**

#### **CLAUDIO BASSETTI**

Vice-Dean, Medical Faculty, University Bern

Chairman and Head, Neurology Department, Inselspital, Bern University Hospital, Bern, Switzerland

The vignette of a patient with cognitive decline and a sleep disturbance is presented at the beginning, and its solution at the end of the lecture.

Introduction: the suggested mechanisms of sleep-related memory consolidation <sup>3, 32, 33</sup> and the sleep-wake changes observed during aging are presented <sup>34</sup>. Experimental studies linking sleep loss with the accumulation of toxic proteins in the brain are shown <sup>35,36</sup>.

Sleep and dementia: sleep-wake changes in the pre-symptomatic, early and advanced phases of dementia syndrome including M. Alzheimer and M. Parkinson are shown <sup>37, 38</sup>.

Diagnosis/management: the diagnostic work-up and treatment options for demented patients with sleep-wake disturbances are discussed <sup>39,40</sup>.

## **SLEEP AND STROKE**

#### CLAUDIO BASSETTI

Vice-Dean, Medical Faculty, University Bern Chairman and Head, Neurology Department, Inselspital, Bern University Hospital, Bern, Switzerland

The vignette of a patient with stroke and a questionable sleep disturbance is presented at the beginning, and its solution at the end of the lecture.

Introduction: the autonomic changes occurring during normal sleep and secondary to sleep disordered breathing (SDB) and other sleep disorders are presented <sup>41</sup>. Experimental studies illustarting the effects of sleep manipulations on the evolution of stroke are shown <sup>42-44</sup>.

Sleep and stroke: the data suggesting SDB (and other sleep disorders) as independent risk factors for stroke are discussed <sup>11, 45, 46</sup>. Current knowledge on frequency and consequences of SDB and other sleep-wake disorders on the outcome of stroke are discussed <sup>11, 47, 48</sup>.

Diagnosis/management: the diagnostic work-up and treatment options for

stroke patients with sleep-wake disturbances are discussed <sup>49</sup>.

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Yang G, Lai CS, Cichon Mi et al, Sleep promotes branch specific formation of dendritic spines after learning, Science 2014;344;1173-1178.
Boyce R, Glasgow SD, Williams S, Adamantidis AR, Causal evidence for the role of REM sleep th eta rhythm in contextual memory consolidation, Science 20 16;352;B 12-616.

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14. Bassetti CL Sleep-related Movement Disorders and Disorders of Motor Control. In; Walters E, BC, ed, Parkinson Disease & Other Movement Disorders; Motor Behavioural Disorders & Behavioural Motor Disorders; University Press, 2014; 661-674.

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Elderly Residents of Group Care Facilities. A [randomized Controlled Trial. JAMA 2008;299:2642-2655.

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