

## Scientific Highlights

Beth Malow\*

*University of Michigan, Michael S. Aldrich Sleep Disorders Laboratory, 1500 East Medical Center Drive, Ann Arbor 48109 0117, MI, USA*

---

### **Scientific highlights of the XV Annual Meeting of the Associated Professional Sleep Societies, Chicago, IL, USA, June 5–10, 2001**

The Associated Professional Sleep Societies met in Chicago this year, presenting the latest findings in sleep research. Dr Ruth Benca chaired the scientific program committee, a joint committee of the American Academy of Sleep Medicine and the Sleep Research Society. The keynote address was given by Dr Joseph S. Takahashi on the neurogenetics of circadian clocks in mammals. Invited lecturers spoke on a variety of topics with an emphasis on neuroscience. The speakers included Dr Jan Born (memory formation in human sleep), Dr Richard Davidson (prefrontal and amygdalar contributions within the emotional brain), Dr Russell Foster (circadian physiology), Dr Pierre Magistretti (cellular and molecular perspective on brain energy metabolism), Dr Susan Redline (familial and racial influences on the prevalence of obstructive sleep apnea), Dr Mircea Steriade (cellular basis for EEG rhythms in sleep and waking), and Dr Esther Sternberg (neural-immune connections in health and disease).

Courses included identification and clinical management of nocturnal events, which involved breakout sessions with video case discussions, electroencephalography for polysomnographers, light treatment of sleep disorders and depression, updates in dental sleep medicine, and the neurobiology of

NREM sleep. Symposia ranged from the pathophysiology of cardiovascular morbidity in sleep apnea syndrome to new developments in hypocretin/orexin research to sleep as a model behavior for the study of CNS-immune interactions. Discussion groups provided for stimulating debate regarding issues in pediatric sleep medicine, drowsy driving, and parasomnias vs. epileptic seizures.

A variety of topics were highlighted in the platform and poster sessions. Basic science and clinical studies of the hypocretin/orexin system were presented. Chemelli and colleagues characterized the metabolic characteristics of orexin knockout mice, showing that they consume less food yet maintain normal body weights and lose less weight when fasted. Ripley and colleagues reported on CSF hypocretin levels in various neurological conditions, with normal levels in Alzheimer's disease, multiple sclerosis, and central nervous system infections. His finding that five of eight patients with Guillian–Barre syndrome had low or undetectable hypocretin levels may be explained by hypothalamic dysfunction in this syndrome.

Within the topic of obstructive sleep apnea, Kado-tani and colleagues presented work that apolipoprotein E4 predisposes to sleep disordered breathing in the normal adult population. As this polymorphism also affects lipid metabolism and cognition, its association with sleep-disordered breathing may have synergistic deleterious effects. Peppard and colleagues discussed the eight-year progression of sleep-disordered breathing in the Wisconsin Sleep Cohort, showing a significant increase in the prevalence of the apnea–hypopnea index. This increased was greater

---

\* Tel.: +1-7346479064; fax: +1-7346479065.

E-mail address: bmalow@umich.edu (B. Malow).

with obesity, age, and snoring. Dover and colleagues compared the usefulness of nasal thermistors and nasal cannula pressure transducers for detecting respiratory events, finding that nasal pressure detected more apneas but fewer hypopneas than thermistors.

Meet the Professor sessions, the international RLS study group, a trainee day of presentations and workshops, and the Pickwick Club research reception and auction rounded out the meeting. Abstracts presented at the meeting are available in *Sleep 2001*, Vol. 24.