Program Description

The regulation of sleep and wake states is a major function of the nervous system and has a profound influence on its activity in health and in disease. The propensity for sleep and wake are regulated by a complex interaction of the sleep homeostatic and circadian clock systems. Sleep and circadian timing are essential in modulating neural function. Recent landmark advances in our understanding of the neurocircuitry and molecular mechanisms underlying the generation of sleep and circadian rhythms have led to improved understanding of their role in the expression and treatment of neurological disorders. This program will focus on the bidirectional relationship between circadian and sleep dysregulation and neurological disorders. Presentations will feature recent exciting findings of the role of sleep and circadian timing in neurodegenerative disorders (Alzheimer’s disease, Parkinson’s disease, Huntington’s disease), restless legs syndrome, and epilepsy.

Learning Objectives

Upon completion, participants should be able to:

- Understand the role of sleep and circadian rhythmicity in Alzheimer’s disease
- Discuss how circadian dysregulation and impaired sleep-wake cycle impact Parkinson’s and Huntington’s disease
- Identify circadian rhythms disturbances in Restless Legs Syndrome
- Understand the role of sleep and circadian rhythmicity in epilepsy
- Discuss strategies to improve circadian function in neurological disorders

Recommended Audience

Academic and Practicing Neurologists, Clinical Researchers, Basic Science Researchers with an Interest in the Field

Recommended Companion Course

Sleep Principles Applied to Neurological Disease