Seiji Nishino
Professor (Research) of Psychiatry & Behavioral Sciences, Emeritus
Psychiatry and Behavioral Sciences - Stanford Center for Sleep Sciences and Medicine

Bio

ACADEMIC APPOINTMENTS

• Professor Emeritus, Psychiatry and Behavioral Sciences - Stanford Center for Sleep Sciences and Medicine

LINKS

• SCN lab: http://med.stanford.edu/school/Psychiatry/scn/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The research focus of the Sleep and Circadian Neurobiology (SCN) Laboratory is the study of the sleep and circadian physiology using various animal models. A portion of the research is carried out using rodent models of narcolepsy and circadian rhythm sleep disorders. The laboratory also carries out pharmacological studies aiming to develop new treatments for these sleep disorders.

Publications

PUBLICATIONS

• An overview of hypocretin based therapy in narcolepsy *EXPERT OPINION ON INVESTIGATIONAL DRUGS*
  Takenoshita, S., Sakai, N., Chiba, Y., Matsumura, M., Yamaguchi, M., Nishino, S.
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• Low dose of aripiprazole advanced sleep rhythm and reduced nocturnal sleep time in the patients with delayed sleep phase syndrome: an open-labeled clinical observation *NEUROPSYCHIATRIC DISEASE AND TREATMENT*
  2018; 14: 1281–86

• Mast cell involvement in glucose tolerance impairment caused by chronic mild stress with sleep disturbance *SCIENTIFIC REPORTS*
  Chikahisa, S., Harada, S., Shimizu, N., Shiuchi, T., Otsuka, A., Nishino, S., Sei, H.
  2017; 7: 13640

• N-Methyl-D-aspartate receptor antibody could be a cause of catatonic symptoms in psychiatric patients: case reports and methods for detection *NEUROPSYCHIATRIC DISEASE AND TREATMENT*
  2017; 13: 339-345

• Wake-promoting effects of ONO-4127Na, a prostaglandin DP1 receptor antagonist, in hypocretin/orexin deficient narcoleptic mice. *Neuropharmacology*
  Sagawa, Y., Sato, M., Sakai, N., Chikahisa, S., Chiba, S., Maruyama, T., Yamamoto, J., Nishino, S.
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• Decline of CSF orexin (hypocretin) levels in Prader-Willi syndrome. American journal of medical genetics. Part A
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• Decline of CSF orexin (hypocretin) levels in Prader-Willi syndrome. American journal of medical genetics. Part A
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• A PERIOD3 variant causes a circadian phenotype and is associated with a seasonal mood trait PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA
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• The pathogenesis of narcolepsy, current treatments and prospective therapeutic targets EXPERT OPINION ON ORPHAN DRUGS
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• Basal forebrain circuit for sleep-wake control. Nature neuroscience
Xu, M., Chung, S., Zhang, S., Zhong, P., Ma, C., Chang, W., Weissbourd, B., Sakai, N., Luo, L., Nishino, S., Dan, Y.
2015; 18 (11): 1641-1647

• Residual effects of zolpidem, triazolam, rilmazafone and placebo in healthy elderly subjects: a randomized double-blind study. Sleep medicine
2015; 16 (11): 1395-1402

• Relationship of orexin (hypocretin) system and astrocyte activation in Parkinson's disease with hypersomnolence SLEEP AND BIOLOGICAL RHYTHMS
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• The Sleep-Promoting and Hypothermic Effects of Glycine are Mediated by NMDA Receptors in the Suprachiasmatic Nucleus NEUROPSYCHOPHARMACOLOGY
Kawai, N., Sakai, N., Okuro, M., Karakawa, S., Tsuneyoshi, Y., Kawasaki, N., Takeda, T., Bannai, M., Nishino, S.
2015; 40 (6): 1405-1416

• Apnea during Cheyne-Stokes-like breathing detected by a piezoelectric sensor for screening of sleep disordered breathing SLEEP AND BIOLOGICAL RHYTHMS
Koyama, T., Sato, S., Kanbayashi, T., Kondo, H., Watanabe, H., Nishino, S., Shimizu, T., Ito, H., Ono, K.
2015; 13 (1): 57-67

• Chronic Powder Diet After Weaning Induces Sleep, Behavioral, Neuroanatomical, and Neurophysiological Changes in Mice. PloS one
Anegawa, E., Kotorii, N., Ishimaru, Y., Okuro, M., Sakai, N., Nishino, S.
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• Noninvasive detection of sleep/wake changes and cataplexy-like behaviors in orexin/ataxin-3 transgenic narcoleptic mice across the disease onset EXPERIMENTAL NEUROLOGY
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• Noninvasive detection of sleep/wake changes and cataplexy-like behaviors in orexin/ataxin-3 transgenic narcoleptic mice across the disease onset. Experimental neurology
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• Association between heart rate variability, blood pressure and autonomic activity in cyclic alternating pattern during sleep. Sleep
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• [Anti-NMDA encephalitis in psychiatry; malignant catatonia, atypical psychosis and ECT]. Rinsho‘ shinkeigaku = Clinical neurology
• Greatly Increased Numbers of Histamine Cells in Human Narcolepsy with Cataplexy ANNALS OF NEUROLOGY

• Histamine from Brain Resident MAST Cells Promotes Wakefulness and Modulates Behavioral States PLOS ONE
Chikahisa, S., Kodama, T., Soya, A., Sagawa, Y., Ishimaru, Y., Sei, H., Nishino, S. 2013; 8 (10)

• Wake-promoting effects of ONO-4127, a prostaglandin DP1 receptor antagonist, in hypocretin deficient narcoleptic mice 21st Congress of the European-Sleep-Research-Society
Sagawa, Y., Sakai, N., Chikahisa, S., Sato, M., Chiba, S., Nishino, S. WILEY-BLACKWELL. 2012: 266–266

• Predictors of Hypocretin (Orexin) Deficiency in Narcolepsy Without Cataplexy SLEEP

• Muscleblind-like 2-Mediated Alternative Splicing in the Developing Brain and Dysregulation in Myotonic Dystrophy NEURON

• Anti-NMDA-receptor antibody detected in encephalitis, schizophrenia, and narcolepsy with psychotic features BMC PSYCHIATRY

• Time-course of cerebrospinal fluid histamine in the wake-consolidated squirrel monkey JOURNAL OF SLEEP RESEARCH

• Familial narcolepsy in the Lipizzaner horse: a report of three fillies born to the same sire VETERINARY QUARTERLY

• SUPRACHIASMATIC NUCLEUS IS ESSENTIAL FOR SLEEP-IMPROVING EFFECTS OF GLYCINE 26th Annual Meeting of the Association-of-Professional-Sleep-Societies (APSS)
Sakai, N., Deguzman, C., Bannai, M., Nishino, S. AMER ACAD SLEEP MEDICINE.2012: A7–A7

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• Recent Advances in the Treatment of Narcolepsy CURRENT TREATMENT OPTIONS IN NEUROLOGY

• Refeeding after a 24-hour fasting deepens NREM sleep in a time-dependent manner PHYSIOLOGY & BEHAVIOR
Shimizu, N., Chikahisa, S., Kitaoka, K., Nishino, S., Sei, H. 2011; 104 (3): 480-487

• The Pathophysiology Basis of Secondary Narcolepsy and Hypersomnia CURRENT NEUROLOGY AND NEUROSCIENCE REPORTS

• Narcolepsy and cataplexy. Handbook of clinical neurology
Nishino, S., Mignot, E. 2011: 783-814
• CHANGES IN BLOOD AMINO ACID LEVEL ASSOCIATED WITH SLEEP DEPRIVATION IN RATS. 25th Anniversary Meeting of the Associated-Professional-Sleep-Societies (APSS) Sakai, N., Bannai, M., Nishino, S. AMER ACAD SLEEP MEDICINE.2011: A107–A107

• BRAIN RESIDENT MAST CELLS AFFECT SLEEP/WAKE PHYSIOLOGY AND PHARMACOLOGY. 25th Anniversary Meeting of the Associated-Professional-Sleep-Societies (APSS) Chikahisa, S., Sagawa, Y., ISHIMARU, Y., Sakai, N., Okuro, M., Nishino, S. AMER ACAD SLEEP MEDICINE.2011: A45–A45

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• Emerging treatments for narcolepsy and its related disorders. EXPERT OPINION ON EMERGING DRUGS Nishino, S., Okuro, M. 2010; 15 (1): 139-158

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• FUNCTIONAL ROLE OF BRAIN MAST CELL-DERIVED HISTAMINE OF MICE IN SLEEP-WAKE REGULATION 23rd Annual Meeting of the Associated-Professional-Sleep-Societies (APSS)
Soya, A., Song, Y., Okuro, M., Kotorii, N., Fujiki, N., Nishino, S.
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• [The US Government's effort in decreasing the cost of sleep-related problems and its outcome]. Journal of UOEH
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Dohi, K., Ripley, B., Fujiki, N., Ohtaki, H., Yamamoto, T., Goto, Y., Nakamachi, T., Shioda, S., Aruga, T., Nishino, S.
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Increased hypocretin-1 levels in cerebrospinal fluid after REM sleep deprivation BRAIN RESEARCH
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CSF histamine and noradrenaline contents in narcolepsy and other sleep disorders 18th Annual Meeting of the Associated-Professional-Sleep-Societies
AMER ACAD SLEEP MEDICINE.2004: 236–236

Diurnal variations of CSF hypocretin (HCRT) and changes in gene expression as detected by microarrays in young and old rats 18th Annual Meeting of the Associated-Professional-Sleep-Societies
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Effects of IV and ICV hypocretin-1 (Orexin A) in hypocretin receptor-2 gene mutated narcoleptic dogs and IV hypocretin-1 replacement therapy in a hypocretin-ligand-deficient narcoleptic dog SLEEP
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• **Relationship between CSF hypocretin levels and hypocretin neuronal loss** *EXPERIMENTAL NEUROLOGY*
  Gerashchenko, D., Munillo-Rodriguez, E., Lin, L., Xu, M., Hallett, L., Nishino, S., Mignot, E., Shiromani, P. J.
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  2003; 61 (6): 823-825

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  Tonokura, M., Fujita, K., Morozumi, M., Yoshida, Y., Kanbayashi, T., Nishino, S.
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• **Transient total sleep loss in cerebral Whipple’s disease: a longitudinal study** *JOURNAL OF SLEEP RESEARCH*
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• **The role of cerebrospinal fluid hypocretin measurement in the diagnosis of narcolepsy and other hypersomnias** *ARCHIVES OF NEUROLOGY*
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- **HLA and hypocretin studies in Korean patients with narcolepsy** *SLEEP*

- **Hypocretin stimulates [(35)GTP gamma S binding in Hcrtr 2-transfected cell lines and in brain homogenate** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*

- **Analysis of onset location, laterality and propagation of cataplexy in canine narcolepsy** *26th Annual Meeting of the Japanese-Society-of-Sleep-Research*

- **Hypocretin-1 (orexin-A) concentrations in cerebrospinal fluid are low in patients with Guillain-Barre syndrome** *26th Annual Meeting of the Japanese-Society-of-Sleep-Research*

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