CURRICULUM VITAE

Lawrence Porter Morin

001-38-2677

Date of Birth: August 11, 1947, Portsmouth, New Hampshire

Family: Married June 4, 1969; two adult children

Education and Degrees:

B.A., Brown University, Providence, RI, 1969, with a major in Psychology
Ph.D., Institute of Animal Behavior, Rutgers University, Newark, NJ, 1974, Psychobiology

Major Fields of Interest:

Biological rhythms in behavior and physiology; environmental factors mediating reproduction; neural and endocrine bases of behavior.

Employment History:

Professor (1995 - present), Dept. Psychiatry and Behavioral Science, Stony Brook University.
Member, Graduate Neurobiology Program (1995-present) Stony Brook University.
Associate Professor (1987 - 1995), Dept. Psychiatry and Behavioral Science, Stony Brook University.
Assistant Professor (1985 - 1987), Dept. Psychiatry and Behavioral Science, Stony Brook University.
Research Assistant Professor (1982 - 1985), Dept. Psychiatry and Behavioral Science, Stony Brook University.
Research Scientist V (1981 - 1983); Long Island Research Institute, Stony Brook University.

Assistant Professor, Psychology (1976 - 1981); Department of Psychology, Dartmouth College

Postdoctoral Fellow (1973 - 1976); Department of Psychology, University of California, Berkeley

NIMH predoctoral trainee (1970 - 1973); Institute of Animal Behavior, Rutgers University
Research Assistant (1969 - 1970); Department of Psychology, Brown University

Addresses:

Department of Psychiatry and	34 Old Post Road	Home	(631) 751-8487
Behavioral Science	E. Setauket, NY 11733	Office	(631) 444-1613
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Stony Brook University		lawrence.morin@stonybrook.edu	
Stony Brook, New York 11794-8101			

Editorial and Society Positions:

Advisory Board, Journal of Biological Rhythms, 2002-present.
Advisory Board, Society for Research on Biological Rhythms, 2002-2011.
Comptroller, Society for Research on Biological Rhythms, 2002-2011.
Chair, Meeting Site Committee, Society for Research on Biological Rhythms, 2001-2004
Features (Associate) Editor, Journal of Biological Rhythms, 2000-2002.
Chair, "Animal Issues Committee," Society for Research on Biological Rhythms, 1993-2010.
Editor, Bulletin for the Society for Light Treatment and Biological Rhythms, 1996-1998, Jointly published with the Society for Research on Biological Rhythms, 1998-2000.
Secretary, Society for Research on Biological Rhythms, 1994-1996.
"Regular Reviewer" (associate editor), Hormones and Behavior, 1993-1995

Grants History:

"Regulation of Masking and Circadian Rhythm Phase," funded by NINDS , 2009-2013, PI, NINDS R01 NS061804.

"Behavior, Biological Rhythms and Brain," funded by NINDS, 1985-2009, PI, R01 NS22168.

"Intrinsic Anatomy of the Circadian Rhythm System," funded by NIMH, 2002-2007, PI, R01 MH064471.

"Circadian and Vestibular System Relationships," funded by the National Space Biomedical Research Institute, 7/2001-10/2004, PI, NSBRI NCC958155.

"Neural Regulation of Non-photic Entrainment," funded by the USAFOSR, 1997-98, PI.

"Small Instrumentation Program," funded by ADAMHA, 1990, for the purchase of a MCID imaging system.

"Environmental Control of Ovulation," funded by NIMH, 1988 - 1992, PI, an R01 grant.

"Aging and Biological Rhythms," funded by NIA, 1985 - 1988, PI, an R01 grant.

"Hormones and Alcohol Consumption," funded by NIAAA, 1983, PI, a small grant.

"Behavior, Biological Clocks and Hormones," funded by NICHD, 1977 - 1984, PI, an R01 grant.

Other Awards:

NIH Postdoctoral Fellowship, University of California, Berkeley, 1974-1976, Dr. Irving Zucker, advisor.
National Science Foundation Undergraduate Research Participation Award, Brown University,1969.

"Predoctoral Fellowship for Elizabeth Meyer: Functional Neuroanatomy of the Circadian Timing System," a National Research Service Award from NIMH, to LP Morin as sponsor; written by Elizabeth Meyer (-Bernstein).

"Neurobiology of Vertebrate Circadian Rhythm Entrainment," grant applications to, and awarded by, NSF and NASA in support of a 1998 FASEB conference on Biological Rhythms, LP Morin, principal organizer.

"Soccer Park Development," a grant application written on behalf of the Three Village Soccer Club and funded by the United States Soccer Federation Foundation, 1998, $25,000 for irrigation and electrical work.

Second Place, Smitty Stevens Ski Race, 1991 Winter Brain Conference; NASTAR gold medal.
Fourth Place, Smitty Stevens Ski Race, 2003 Winter Brain Conference; NASTAR gold medal.

Invited Colloquia:

Colorado State University "The Circadian Visual System"
Cornell Medical Center "Neural Circuitry Controlling Rodent Circadian Rhythmicity"
Harvard University Medical School, Dept. Neurology "Light-induced sleep"
Lehigh University "Hamster Circadian Visual System"
Oregon Health Sciences University "The Circadian Visual System"
Uniformed Services University "Structure and Function of the Circadian Visual System"
University of Basel "The Circadian Visual System"
University of Buffalo, "The Clock in Context: Structure and Function of the Hamster Circadian Rhythm System."
University of Delaware "Neural Circuitry Controlling Rodent Circadian Rhythmicity"
University of Massachusetts "Neural Circuitry Controlling Rodent Circadian Rhythmicity"
University of Southern Illinois "Neural Circuitry Controlling Rodent Circadian Rhythmicity"
University of Virginia "The Clock in Context: Structure and Function of the Hamster Circadian Rhythm System."
Virginia Commonwealth University "The Circadian Visual System"
Yale University, Dept. Ob/Gyn "The Circadian Visual System"

Invited Speaker:

Gordon Conference on Chronobiology (1985, 1989, 1991, 1999, 2003) Topics:
"Hormonal modulation of circadian rhythms"
"Neural circuitry of circadian rhythms"
"Benzodiazepines and circadian rhythm control"
"Midbrain contributions to circadian rhythmicity"
"Retinal contributions to hamster circadian rhythm regulation"

New York Academy of Sciences Serotonin Conference (1989) New York City
"Serotonin Regulation of Circadian Rhythms"

NIH Symposium: The Suprachiasmatic Nucleus (1989)
"Neural control of circadian rhythms as revealed through the use of benzodiazepines"

American Professional Sleep Societies
Symposium on Biological Rhythms (1990) "Neural circuitry regulating circadian rhythms"

Symposium on the Suprachiasmatic Nucleus (1994) "Afferent control of circadian rhythmicity;" also, lecturer in the 4 hr mini-course, "The Suprachiasmatic Nucleus" taught for the Society.

Winter Brain Conference (1991)
Chair and speaker in the panel, "Neural Control of Mammalian Circadian Rhythms"

World Federation of Sleep Research Societies Meeting on the Cellular Consequences of Sleep (1993) - Focus Group on "Serotonin and State Control"

Society for Research on Biological Rhythms (1994)
Symposium lecture, "Neuroanatomical considerations for non-photic entrainment processes;" also participant in a Discussion Session on "Glia and Circadian Rhythms" plus similar participation in the 1998, 1990 and 1988 meetings.

Special Conference (1995) on the "Molecular biology and genetic approaches to sleep control;" Bethesda, MD; co-sponsored by 9 Institutes of the NIH. Lecture, "Anatomy of the circadian visual system"

Society for Light Treatment and Biological Rhythms (1997)
Symposium lecture, "Anatomy of the circadian rhythm system," Vancouver, B.C.

International Congress of Chronobiology (1999)
Symposium lecture, "Anatomy of circadian rhythm regulation," Washington, D.C.

World Federation of Sleep Research Societies (1999)
Symposium lecture, "Serotonin and circadian rhythm regulation," Dresden, Germany

Rushton Symposium on Biological Clocks (2000)
Symposium lecture, "Neuroanatomy of the circadian rhythm system," Florida State University, Tallahassee

Winter Brain Conference (2003)
Speaker in the panel, "Afferent Control of Circadian Rhythmicity"

Polish Neuroscience Society (2005)
Speaker in the panel, "Neural mechanisms of the circadian timing system," Krakow, Poland

International Graduate School for Neuroscience, Ruhr University, Bochum, Germany
Speaker in the symposium, "The Molecular and Cellular Basis of Circadian Clocks," Bochum, Germany (2006)

Lorentz Center Conference, Lorentz Center, Leiden University, The Netherlands (2010)
Commentator on the organization of the suprachiasmatic nucleus

Meeting Organizer:

FASEB Summer Conference, July, 1998, "Neurobiology of Vertebrate Circadian Rhythm Entrainment," Snowmass, CO

Sleep and Circadian Rhythm DataBlitz (1999 - 2001), Co-organizer who selected participants for this now-annual event at the Society for Neuroscience Meeting, sponsored by the Soc. Res. Biol. Rhythms and Nat. Ctr. Sleep Disorders Res.; 1999 was the initial year.

Circuits of the Circadian System (2010) Co-organized with Drs. William Schwartz and Joke Meijer, A Lorentz Center conference held at the Lorentz Center, Leiden University, The Netherlands

Recent Reviewing:

American Journal of Physiology
Biology of Reproduction
Brain Research
European Journal of Neuroscience
Journal of Biological Rhythms (Regular)
Journal of Comparative Neurology
Journal of Neuroscience
Journal of Physiology
Neuropharmacology
Neuroscience
PlosOne
Psychopharmacology
Science
Visual Neuroscience

Ad hoc reviews for the US-Israel Binational Science Foundation
Ad hoc reviews for the Biotechnology and Biological Sciences Research Council, UK
Ad hoc reviews for the National Science Foundation
Ad hoc reviews for the National Sleep Foundation
Ad hoc reviews for the US Air Force Office for Scientific Research
Ad hoc reviews for the Netherlands Organization for Scientific Research

Reviewer, Biological & Physiological Sciences Special Emphasis Panel, NIH

Temporary reviewer, Psychobiology, Behavior, and Neuroscience Review Committee, NIMH
Temporary reviewer, Mol.ecular & Cellular Developmental Neurobiol. Rev. Committee, NIMH

Member, NIH IRG #3 ("Sleep and Circadian Rhythms") for Integrative, Functional, and Cognitive Neuroscience (IFCN-3) 1998-2004; Committee renamed "Biological Rhythms and Sleep" in 2003; chair, 2002-2004.

Societies:

AAAS
Society for Neuroscience
Society for Research on Biological Rhythms
National Audubon Society

Students and Postdocs

Leslie Cummings (MA)	Dartmouth College, Psychology, 1978-80
Ralph Johnson (Postdoc)	Dept. Psychiatry, Stony Brook, 1984-87
Laura Smale (Postdoc)	Dept. Psychiatry, Stony Brook, 1987-90
Nina Goodless (Postdoc)	Dept. Psychiatry, Stony Brook, 1990-92
Galina Botchkina (Postdoc)	Dept. Psychiatry, Stony Brook, 1992-95
Elizabeth Meyer-Bernstein (PhD student)	Dept. Neurobiology, Stony Brook, 1992-98
Elliott Marchant (Postdoc)	Dept. Psychiatry, Stony Brook, 1996-99
Rebecca Tischler (MA)	Dept. Neurobiology, Stony Brook, 2001-2002
Louise Muscat (PhD Student)	Dept. Neurobiology, Stony Brook, 2001-2005
Luis Vidal (Postdoc)	Dept. Psychiatry, Stony Brook, 2003-2006
Sara Hefton (med student)	Stony Brook School of Medicine, summer 2007
Tony Wang (undergraduate)	Stony Brook University, 2007-2008
Annie Xu (undergraduate)	Stony Brook University, 2008-2009
Pablo Lituma (Undergraduate)	Stony Brook University, 2008-2009
Richard Pongvitayapanu (Undergraduate)	Cornell University student, summer, 2010
Steven Mirabella (Undergraduate)	Stony Brook University, 2011-2013
Maxim Grachev (Undergraduate)	Stony Brook University, 2011-2012
Esther Bilemkis (Undergraduate)	Stony Brook University, 2011-2012
Ting Chen (Undergraduate)	Stony Brook University, 2012-2013

Research Assistant Professor
Seth Horowitz, PhD, worked in my lab on the project, "Circadian and Vestibular System Relationships," funded by NSBRI, 2002-2005.

PUBLICATIONS

A. Original Investigations:

1. **Matthews, T.J., Morin, L.P. and Church, R.M. (1971). Avoidance of thermal stimuli in the rat. Psychon. Sci. 22, 59-60.**

2. **Morin, L.P. (1973). Ovulatory and body weight response of the hamster to constant light or pinealectomy. Neuroendocrinology 12, 192-198.**

3. **Morin, L.P. and Feder, H.H. (1973). Multiple progesterone injections and the duration of estrus in ovariectomized guinea pigs. Physiol. Behav. 11, 861-865.**

4. **Morin, L.P. and Feder, H.H. (1974). Independence of progesterone-induced facilitation and inhibition of lordosis behavior in ovariectomized guinea pigs. Horm. Behav. 5, 7-12.**

5. **Feder, H.H. and Morin, L.P. (1974). Suppression of lordosis in guinea pigs by ethamoxytryphetol (MER-25) given at long intervals (34-46 hr) after estradiol benzoate treatment. Horm. Behav. 5, 63-71.**

6. **Morin, L.P. and Feder, H.H. (1974). Inhibition of lordosis behavior in ovariectomized guinea pigs by mesencephalic implants of progesterone. Brain Res. 70, 71-80.**

7. **Morin, L.P. and Feder, H.H. (1974). Hypothalamic progesterone implants and facilitation of lordosis behavior in estrogen-primed ovariectomized guinea pigs. Brain Res. 70, 81-93.**

8. **Morin, L.P. and Feder, H.H. (1974). Intracranial estradiol benzoate implants and lordosis behavior of ovariectomized guinea pigs. Brain Res. 70, 95-102.**

9. **Morin, L.P. (1975). Effects of various feeding regimens and photoperiod or pinealectomy on ovulation in the hamster. Biol. Reprod. 13, 99-103.**

10. **Morin, L.P., Powers, J.B. and White, M. (1976). Effects of the antiestrogens, MER-25 and Cl-628, on rat and hamster lordosis. Horm. Behav. 7, 283-291.**

11. **Crowley, W.R., Feder, H.H. and Morin, L.P. (1976). The role of monoamines in sexual behavior of the female guinea pig. Pharm. Biochem. Behav. 4, 67-71.**

12. **Rusak, B. and Morin, L.P. (1976). Testicular responses to photoperiod are blocked by lesions of the suprachiasmatic nuclei in golden hamsters. Biol. Reprod. 15, 366-374.**

13. **Morin, L.P., Fitzgerald, K. and Zucker, I. (1977). Estradiol shortens the period of hamster circadian rhythms. Science 196, 305-307.**

14. **Morin, L.P., Fitzgerald, K., Rusak, B. and Zucker, I. (1977). Circadian organization and neural mediation of hamster reproductive rhythms. Psychoneuroendocrinology 2, 73-98.**

15. **Zucker, I. and Morin, L.P. (1977). Photoperiodic influences on testicular regression, recrudescence and the induction of scotorefractoriness in male golden hamsters. Biol.**

Reprod. 17, 493-498.

16. Morin, L.P. and Fleming, A.S. (1978). Systematic variation of food intake and body weight with the estrous cycle or estrogen treatment in the hamster. J. Comp. Physiol. Psychol. 92, 1-6.

17. Morin, L.P. and Zucker, I. (1978). Photoperiodic regulation of copulatory behavior in the male hamster. J. Endocr. 77, 249-258.

18. Morin, L.P. (1978). Rhythmicity of hamster gnawing: Ease of measurement and similarity to running activity. Physiol. Behav. 21, 317-320.

19. Zucker, I., Fitzgerald, K. and Morin, L.P. (1980). Sex differentiation of the circadian system in the golden hamster. Amer. J. Physiol. 238, R97-R101.

20. Morin, L.P. (1980). Effect of ovarian hormones on synchrony of hamster circadian rhythms. Physiol. Behav. 24, 741-749.

21. Morin, L.P. and Cummings., L.A. (1981). Effect of surgical or photoperiodic castration, testosterone replacement or pinealectomy on male hamster running rhythmicity. Physiol. Behav. 26, 825-838.

22. Morin, L.P. (1981). An effect of photoperiod history on reproductive function and a circadian rhythm of blind male hamsters. Physiol. Behav. 27, 89-94.

23. Morin, L.P. and Cummings, L. (1982) Splitting of wheelrunning rhythms by castrated or steroid treated male and female hamsters. Physiol. Behav. 29, 665-675.

24. Forger, N.G. and Morin, L.P. (1982) Reproductive state modulates ethanol intake in rats: Effects of ovariectomy, ethanol concentration, estrous cycle and pregnancy. Pharmacol. Biochem. Behav. 17, 323-331.

25. Morin, L.P. and Forger, N.G. (1982) Alcohol ingestion by rats and hamsters: Roles of ovaries and adrenals and replacement hormones. Pharmacol. Biochem. Behav. 17, 529-537.

26. Peterson, M.E. and Morin, L.P. (1984) Behavioral effects of d-amphetamine and apomorphine in the hamster. Pharmacol. Biochem. Behav. 20, 855-858.

27. Boulos, Z. and Morin, L.P. (1985) Entrainment of split circadian activity rhythms in hamsters. J. Biol. Rhythms 1, 1-15.

28. O'Connor, L.H., Morin, L.P. and Feder, H.H. (1985) A diurnal fluctuation in medial basal hypothalamic-preoptic cytosol estrogen receptors in ovariectomized hamsters. Brain Res. 347, 376-380.

29. Morin, L.P. and Gavin, M.L. and Ottenweller, J.E. (1986) Propylthiouracil causes phase delays and circadian period lengthening in male and female hamsters. Am. J. Physiol. 250, R151-R160.

30. Morin, L.P. (1986) Environment and hamster reproduction: Responses to phase-specific starvation during the estrous cycle. Am. J. Physiol. 251, R663-R669.

31. Morin, L.P. (1988) Propylthiouracil, but not other antithyroid treatments, lengthens the hamster circadian period. Am. J. Physiol. 255, R1-R5.

32. Johnson, R.F., Smale, L., Moore, R.Y. and Morin, L.P. (1988) Lateral geniculate lesions block

circadian phase shift responses to a benzodiazepine. Proc. Nat. Acad. Sci. 85, 5301-5304.

33. Morin, L.P. (1988) Age-related changes in hamster circadian period, entrainment and rhythm splitting. J. Biol. Rhythms 3, 237-248.

34. Morin, L.P., Johnson, R.F., Smale, L. and Moore, R.Y. (1988) The role of the lateral geniculate nuclei in phasic response to photic and pharmacologic stimuli. Ann. Rev. Chronopharmacol. 5, 89-92.

35. Johnson, R.F., Moore, R.Y. and Morin, L.P. (1988) Loss of entrainment and anatomical plasticity after lesions of the hamster retinohypothalamic tract. Brain Res. 460, 297-313.

36. Johnson, R.F., Morin, L.P. and Moore, R.Y. (1988) Retinohypothalamic projections in the hamster and rat demonstrated using cholera toxin. Brain Res. 462, 301-312.

37. Johnson, R.F., Moore, R.Y. and Morin, L.P. (1988) Running wheel activity in hamsters with hypothalamic damage. Physiol. Behav. 43, 755-763.

38. Johnson, R.F., Moore, R.Y. and Morin, L.P. (1989) Paraventricular nucleus efferents mediating photoperiodism in male golden hamsters. Neurosci. Lett. 98, 85-90.

39. Johnson, R.F., Moore, R.Y. and Morin, L.P. (1989) Lateral geniculate lesions alter activity rhythms in the hamster. Brain Res. Bull. 22, 411-422.

40. Smale, L., Cassone, V., Moore, R.Y. and Morin, L.P. (1989) Paraventricular nucleus projections mediating pineal melatonin and gonadal responses to photoperiod in the hamster. Brain Res. Bull. 22, 263-269.

41. Morin, L.P., Johnson, R.F. and Moore, R.Y. (1989) Two brain nuclei regulating circadian rhythms are identified by GFAP immunoreactivity in hamsters and rats. Neurosci. Lett. 99, 55-60.

42. Reuss, S., Johnson, R.F., Morin, L.P. and Moore, R.Y. (1989) Localization of sympathetic preganglionic neurons in the spinal cord of the golden hamster. Brain Res. Bull. 22, 289-293.

43. Smale, L. and Morin, L.P. (1990) Photoperiodic responsiveness of hamsters with lesions of the lateral geniculate nucleus is related to hippocampal damage. Brain Res. Bull. 24, 185-190.

44. Smale, L., Michels, K.M., Moore, R.Y. and Morin, L.P. (1990) Destruction of the hamster serotonergic system by 5,7-DHT: effects on circadian rhythm phase, entrainment and response to triazolam. Brain Res. 515, 9-19.

45. Michels, K.M., Morin, L.P. and Moore, R.Y. (1990) $GABA_A$/benzodiazepine receptor localization in the circadian timing system. Brain Res. 531, 16-24.

46. Goodless-Sanchez, N., Moore, R.Y. and Morin, L.P. (1991) Lateral hypothalamic regulation of hamster circadian rhythm phase. Physiol. Behav. 49, 533-539.

47. Smale, L., Blanchard, J., Moore, R.Y. and Morin, L.P. (1991) Immunocytochemical characterization of the suprachiasmatic nucleus and the intergeniculate leaflet in the diurnal ground squirrel, Spermophilus lateralis. Brain Res. 563, 77-86.

48. Morin, L.P. and Blanchard, J. (1991) Depletion of brain serotonin by 5,7-DHT modifies hamster circadian rhythm response to light. Brain Res. 566,173-185.

49. Morin, L.P. and Blanchard, J. (1991) Serotonergic modulation of hamster wheelrunning: Response to lighting conditions and food deprivation. Brain Res. 566, 186-192.

50. Morin, L.P., Blanchard, J. and Moore, R.Y. (1992) Intergeniculate leaflet and suprachiasmatic nucleus organization and connections in the hamster. Vis. Neurosci. 8, 219-230.

51. Morin, L.P. (1992) Serotonergic reinnervation of the hamster suprachiasmatic nucleus and intergeniculate leaflet without functional circadian rhythm recovery. Brain Res. 599, 98-104.

52. Morin, L.P. and Blanchard, J. (1993) Organization of the hamster paraventricular hypothalamic nucleus. J. Comp. Neurol. 332, 341-357.

53. Morin, L.P. (1993) Age, but not pineal status, modifies circadian periodicity in golden hamsters. J. Biol. Rhythms. 8, 189-197.

54. Botchkina, G.I. and Morin, L.P. (1993) Development of the hamster serotonergic system: cell groups and diencephalic projections. J. Comp. Neurol. 338, 405-431.

55. Morin, L.P., Goodless-Sanchez, N., Smale, L. and Moore, R.Y. (1994) Projections of the suprachiasmatic nuclei, subparaventricular zone and retrochiasmatic area in the golden hamster. Neuroscience, 61, 391-410.

56. Aguilar-Roblero,R., Morin, L.P. and Moore, R.Y. (1994) Morphological correlates of circadian rhythm restoration induced by transplantation of the suprachiasmatic nucleus in hamsters. Exper. Neurol. 130, 250-260.

57. Botchkina, G.I. and Morin, L.P. (1995) Specialized neuronal and glial contributions to development of the lateral geniculate complex and circadian visual system. J. Neurosci., 15, 190-201.

58. Morin, L.P. and Blanchard, J. (1995) Organization of the hamster intergeniculate leaflet: NPY and ENK projections to the suprachiasmatic nucleus, intergeniculate leaflet and posterior limitans nucleus. Vis. Neurosci., 12, 57-67.

59. Botchkina, G.I. and Morin, L.P. (1995) Organization of permanent and transient NPY-IR neuron groups and projections in the developing hamster diencephalon. J. Comp. Neurol., 357, 573-602.

60. Botchkina, G.I. and Morin, L.P. (1995) Ontogeny of radial glia, astrocytes and vasoactive intestinal peptide immunoreactive neurons in hamster suprachiasmatic nucleus. Devel. Brain Res., 86, 48-56.

61. Meyer-Bernstein, E.L. and Morin, L.P. (1996) Differential serotonergic innervation of the suprachiasmatic nucleus and the intergeniculate leaflet and its role in circadian rhythm modulation. J. Neurosci., 16, 2097-2111.

62. Meyer-Bernstein, E.L. and Morin, L..P. (1997) The serotonergic projection from the median raphe nucleus to the suprachiasmatic nucleus modulates activity phase onset, but not other circadian rhythm parameters. Brain Res. 755. 112-120.

63. Morin, L.P. and Blanchard, J.H. (1997) Neuropeptide Y and enkephalin immunoreactivity in retinorecipient nuclei of the hamster pretectum and thalamus. Vis. Neurosci. 14, 765-777.

64. Morin, L.P. and Blanchard, J.H. (1998) The intergeniculate leaflet is a major constituent of the subcortical visual system: Interconnections among nuclei of the subcortical visual shell. J.

Comp. Neurol. 396, 288-309.

65. Meyer-Bernstein, E.L. and Morin, L.P. (1998) Destruction of serotonergic neurons in the median raphe nucleus blocks circadian rhythm phase shifts to triazolam, but not to novel wheel access. J. Biol. Rhythms, 13, 494-505.

66. Morin, L.P. and Meyer-Bernstein, E.L. (1999) The ascending serotonergic system in the hamster: comparison with projections of the dorsal and median raphe nuclei. Neuroscience, 91, 81-105.

67. Meyer-Bernstein, E.L. and Morin, L.P. (1999) Electrical stimulation of the median or dorsal raphe nuclei reduces light-induced FOS protein in the suprachiasmatic nucleus and causes circadian activity rhythm phase shifts. Neuroscience 92, 267-279.

68. Morin, L.P. and Blanchard, J.H. (1999) Forebrain connections of the hamster intergeniculate leaflet: comparison with those of ventral lateral geniculate nucleus and retina. Vis. Neurosci. 16, 1037-1054.

69. Marchant, E.G. and Morin, L.P. (1999) The hamster circadian rhythm system includes nuclei of the subcortical visual shell. J. Neurosci. 19, 10482-10493.

70. Marchant, E.G. and Morin, L.P. (2001) Light augments FOS protein induction in brain of short-term enucleated hamsters. Brain Res. 902, 51-65.

71. Morin, L.P. and Blanchard, J.H. (2001) Neuromodulator content of hamster intergeniculate leaflet neurons and their projection to the suprachiasmatic nucleus or visual midbrain. J. Comp. Neurol. 437, 79-90.

72. Morin, L.P. and Pace, L. (2002) The intergeniculate leaflet, but not the visual midbrain, mediates hamster circadian rhythm response to constant light. J. Biol. Rhythms 17, 217-226.

73. Morin, L.P., Blanchard, J.H. and Provencio, I. (2003) Retinal ganglion cell projections to the hamster suprachiasmatic nucleus, intergeniculate leaflet and visual midbrain: bifurcation and melanopsin immunoreactivity. J. Comp. Neurol. 465, 401-416.

74. Muscat, L., Huberman, A.D., Jordan, C. and Morin, L.P. (2003) Crossed and uncrossed retinal projections to the hamster circadian system. J. Comp. Neurol. 466, 513-524.

75. Tischler, R.C. and Morin, L.P. (2003) Reciprocal serotonergic connections between the hamster median and dorsal raphe nuclei. Brain Res. 981, 126-132.

76. Horowitz, S.S., Blanchard, J.H. and Morin, L.P. (2004) Intergeniculate leaflet and ventral lateral geniculate nucleus afferent connections: an anatomical substrate for functional input from the vestibulo-visuomotor system. J. Comp. Neurol., 474, 227-245.

77. Horowitz, S.S., Blanchard, J.H. and Morin, L.P. (2005) Medial vestibular connections with the hypocretin (orexin) system. J. Comp. Neurol., 487, 127-146.

78. Morin, L.P. and Blanchard, J.H. (2005) Descending projections of the intergeniculate leaflet: relationship to the sleep/arousal and visuomotor systems. J. Comp. Neurol., 487, 204-216.

79. Muscat, L., Tischler, R. and Morin, L.P. (2005) Functional analysis of the role of the median raphe as a regulator of hamster circadian system sensitivity to light. Brain Res. 1044, 59-66.

80. Vidal, L. and Morin, L.P. (2005) Hypothalamic and zona incerta neurons expressing hypocretin,

but not melanin concentrating hormone, project to the hamster intergeniculate leaflet. Neuroscience, 134, 1081-1090.

81. Muscat, L. and Morin, L.P. (2005) Binocular contributions to the sensitivity and integrative capacity of the circadian rhythm system to light. J. Biol. Rhythms, 20, 513-525.

82. Morin, L.P., Shivers, K.-T., Blanchard, J.H. and Muscat, L. (2006) complex organization of mouse and rat suprachiasmatic nucleus. Neuroscience, 137, 1285-1297.

83. Muscat, L. and Morin, L.P. (2006) Intergeniculate leaflet: contributions to photic and non-photic responsiveness of the hamster circadian system. Neuroscience, 140, 305-320.
84. Vidal, L. and Morin, L.P. (2007) Absence of normal photic integration in the circadian visual system: Response to millisecond light flashes. J.Neurosci. 27, 3375-3382.

85. Göz, D., Studholme, K., Lappi, D.A., Rollag, M.D., Provencio, I. and Morin, L.P. (2008) Targeted destruction of photosensitive retinal ganglion cells with a saporin conjugate alters the effects of light on mouse circadian rhythms. PLoS ONE 3(9): e3153. doi:10.1371/journal.pone.0003153.

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