CURRICULUM VITAE

Name: Eric L. Bittman
Birthdate: May 29, 1952
Birthplace: New York, NY
Personal data: Married (Sandra I. Sulsky, September 30, 2001); two children (Sarah Ruth, Nov. 16, 1986, and Rachel Alexandra, Jan. 18, 1989).

Education:

University of Pennsylvania. B.A. (Biology & Psychology) 1973
University of California at Berkeley. M.A. (Psychology) 1977
University of California at Berkeley. Ph.D. (Psychology & Endocrinology) 1978
University of Michigan at Ann Arbor. Postdoctoral Scholar (Reproductive Endocrinology Program 1978-1982

Employment:

Visiting Scientist, Department of Psychology, Barnard College of Columbia University. 1982.
Assistant Professor, Laboratory of Neuroendocrinology, The Rockefeller University. 1982-1984
Adjunct Assistant Professor, Laboratory of Neuroendocrinology, The Rockefeller University, 1984-1986.
Assistant Professor, Department of Zoology, The University of Massachusetts at Amherst, 1984-1987
Associate Professor, Department of Zoology, The University of Massachusetts at Amherst, 1987-1992.
Professor, Department of Biology, The University of Massachusetts at Amherst, 1992-present.

Awards and Honors:

Michigan Society of Fellows, 1978-1982
Sloan Foundation Fellow in Neuroscience, 1985-1989
Research Scientist Development Award, Level II, 1992-1997

Previous, Current and Pending Funding:

NSF Predoctoral Fellowship, 1973-1976 University of California Regents' Fellowship, 1977- 1978
Michigan Society of Fellows, 1979-82
NIH Postdoctoral Fellowship, 1979-1982
Principal Investigator, NIH New Investigator Award, "Neural Mechanisms of Melatonin Control of Reproduction" (R23 HD20018; Total Costs $136,693) 1983-1986
Co-Principal Investigator (with Dr. Lewis C. Krey, The Rockefeller University), "Photoperiodic Control of Neuroendocrine Function" (RO1 NS20279; Total Costs $238,080) 1983-1986
Sloan Foundation Fellowship, "Neuroendocrinology of Melatonin" (BR-2532; Total Costs $28,750) 1985-1989
Recipient of two Biomedical Research Support Grants, University of Massachusetts at Amherst, (Total Costs $10,000) 1984-5 and 1987-8
Principal Investigator, NSF Award, "Circadian and Hormonal Functions of Suprachiasmatic Grafts" (BNS86-16935; Total Costs $231,000) 1987-1990.
Principal Investigator, NIMH Award, "Opiates and the Biopsychology of Photoperiodism" (RO1-MH44132) 1989-1997 (Total costs for current year: $154,832)
Research Scientist Development Award, "Neuropeptides, Receptors and Photoperiodism" (Total Costs $305,435) 1992-1997.
Principal Investigator, NSF Award, "Neuroendocrine Functions of the Suprachiasmatic Nucleus" (Direct Costs $45,000, 1994-96).
Principal Investigator, NSF SGER award, "Molecular mechanisms of seasonal breeding in the ewe,"(total costs, 1996-97 $50,000).
Principal Investigator, NSF Award, "Photoperiodic and neuroendocrine regulation of brain plasticity," (total costs, $160,000, 1999-2002).

Principal Investigator, NIH Award, “Neural control of circadian rhythms and photoperiodism,” (total costs, $996,352; 2000-2004).

Society Memberships:

Society for Neuroscience
Society for the Study of Reproduction
The Endocrine Society
British Neuroendocrine Group
European Pineal Society
Society for Behavioral Neuroendocrinology

Publications

Bittman, E.L., and Zucker, I. (1977) Influences of the adrenal gland and photoperiod on the hamster oestrous cycle. J. Reprod. Fert. 50:331-333.

Bittman, E.L. (1978). Photoperiodic influences on testicular regression in the golden hamster: Termination of scotorefractoriness. Biol. Reprod. 18:871-877.

Bittman, E.L. (1978). Hamster Refractoriness: The Role of Insensitivity of Pineal Target Tissues. Science 202:648-650.

Bittman, E.L. (1978). Melatonin prevents refractoriness to short days in male hamsters. Proc. Soc. Exptl. Biol. Med. 158:359-362.

Bittman, E.L., and Goldman, B.D. (1979). Serum levels of gonadotrophins in hamsters exposed to short photoperiods: Effects of adrenalectomy and ovariectomy. J. Endocrinol. 83:113-118.

Bittman, E.L., Goldman, B.D., and Zucker, I. (1979). Testicular Responses to Melatonin are Altered by Lesions of the Suprachiasmatic Nuclei in Golden Hamsters. Biology of Reproduction 21:647-656.

Zucker, I., Cramer, C.P., and Bittman, E.L., (1980). Regulation by the pituitary gland of circadian rhythms in the hamster. J. Endocrinol. 85:17-25.

Bittman, E.L., and Zucker, I. (1981). Photoperiodic Termination of Hamster Refractoriness: Participation of the Pineal Gland. Biology of Reproduction 24:568-572.

Goodman, R.L., Bittman, E.L., Foster, D.L., and Karsch, F.J. (1981). The endocrine basis of the synergistic suppression of LH by estradiol and progesterone. Endocrinology 109:1414-1417.

Goodman, R.L., Bittman, E.L., Foster, D.L. and Karsch, F.J. (1982). Alterations in the control of LH pulse frequency underlie the seasonal variation in estradiol negative feedback in the ewe. Biol. Reprod. 27:580-599.

Dempsey, R.J., Hopkins, J., Bittman, E.L., and Kindt, G.W. (1982). Total pinealectomy by an occipital parasaggital approach in sheep. Surgical Neurology 18:377-380.

Bittman, E.L., Karsch, F.J., and Hopkins, J.W. (1983). Role of the Pineal Gland in Ovine Photoperiodism: Regulation of Seasonal Breeding and Negative Feedback Effects of Estradiol Upon LH Secretion. Endocrinology 113:329-336.

Bittman, E.L., Dempsey, R.J., and Karsch, F.J. (1983). Pineal Melatonin Secretion Drives the Reproductive Response to Daylength in the Ewe. Endocrinology 113:2276-2283.

Karsch, F.J., Foster, D.L., Bittman, E.L., and Goodman, R.L. (1983). A role of estradiol in enhancing luteinizing hormone pulse frequency during the follicular phase of the estrous cycle of sheep. Endocrinology 113:1333-1339.

Bittman, E.L., and Karsch, F.J. (1984). Nightly Duration of Pineal Melatonin Secretion Determines the Reproductive Response to Inhibitory Day Length in the Ewe. Biol. Reproduction 30: 585-593.

Karsch, F.J., Bittman, E.L., Foster, D.L., Goodman, R.L., Legan, S.J., and Robinson, J.E. (1984). Neuroendocrine basis of seasonal reproduction. Recent Progress in Hormone Research 40:185-232.

Bittman, E.L. (1984). Melatonin and photoperiodic time measurement: Evidence from rodents and ruminants. In: The Pineal Gland (R.J. Reiter, editor), Raven Press, Comprehensive Endocrinology Series, New York, N.Y. pp. 155-192.

Silver, R., and Bittman, E.L. (1984). Reproductive mechanisms: Interaction of circadian and interval timing. Annals of the N.Y. Academy of Science 423:488-514.

Lehman, M.N., Bittman, E.L., and Winans Newman, S., (1984). Role of the hypothalamic paraventricular nucleus in neuroendocrine responses to daylength in the golden hamster. Brain Res. 308:25-32.

Bittman, E.L., Kaynard, A.H., Olster, D.H., Robinson, J.E., Yellon, S.M., and Karsch, F.J. (1985). Pineal Melatonin Mediates Photoperiodic Control of Pulsatile Luteinizing Hormone Secretion in the Ewe. Neuroendocrinology 40:409-418.

Bartness, T.J., Bittman, E.L., and Wade, G.N. (1985). Paraventricular nucleus lesions exaggerate dietary obesity but block photoperiod-induced weight gains and suspension of estrous cyclicity in Syrian hamsters. Brain Res. Bull. 14:427-430.

Yellon, S.M., Bittman, E.L., Lehman, M.N., Olster, D.H., Robinson, J.E., and Karsch, F.J. (1985). Importance of the duration of nocturnal melatonin secretion in determining the reproductive response to inductive photoperiod in the ewe. Biol. Reprod. 32:523-529.

Karsch, F.J., Bittman, E.L., Robinson, J.E., Yellon, S.M., Wayne, N.L., Olster, D.H., and Kaynard, A.H. (1986). Melatonin and photorefractoriness: Loss of response to the melatonin signal leads to reproductive transitions in the ewe. Biol. Reprod. 34:265-274.

Bittman, E.L. (1986). The role of rhythms in the response to melatonin. In: Photoperiodism Melatonin and the Pineal, Ciba Foundation Symposium #117, Pitman, London, pp. 149-169.

Lehman, M.N., Silver, R., Gladstone, W.R., Kahn, R., Gibson, M., and Bittman, E.L. (1987). Circadian Rhythms Restored by Neural Transplant: Integration between the Graft and the Host Brain. J. Neuroscience 7:1626-1638.

Bittman, E.L., and Lehman, M.N. (1987). Paraventricular Neurons Control Hamster Photoperiodism by a Predominantly Uncrossed Descending Pathway. Brain Research Bulletin 19:687-694.

Bittman, E.L., and Krey, L.C. (1988). Influence of Daylength on Nuclear Androgen Receptor Occupancy in Neuroendocrine Tissues of the Golden Hamster. Neuroendocrinology 47:61-67.

Bittman, E.L., Crandell, R.G., and Lehman, M.N. (1988). Influences of the Paraventricular and Suprachiasmatic Nuclei and Olfactory Bulbs on Melatonin Responses in the Golden Hamster. Biology of Reproduction 40:118-126.

Krey, L.C., Ronchi, E., and Bittman, E.L. (1989). Effects of Daylength on Androgen Metabolism and on Pulsatile Luteinizing Hormone Secretion in Male Golden Hamsters. Neuroendocrinology 50:533-542.

Tubbiola, M.L., Nock, B., and Bittman, E.L. (1989). Photoperiodic Changes in Opiate Binding and Their Functional Implications in Golden Hamsters. Brain Research 503:91-99.

Bittman, E.L., and Blaustein, J.D. (1990). Effects of day length on sheep neuroendocrine estrogen and progestin receptors. American Journal of Physiology 258:R135-R142.

Bittman, E.L., Hegarty, C.M., Layden, M.Q., and Jonassen, J.A. (1990). Photoperiodic Regulation of Steroid Receptors, Sexual Behavior, and Pituitary mRNA in Female Golden Hamsters. Journal of Molecular Endocrinology, 5:15-25.

Silver, R., Lehman, M.N., Gibson, M., Gladstone, W.R., and Bittman, E.L. (1990). Dispersed Cell Suspensions of Fetal SCN Restore Circadian Rhythmicity in SCN-lesioned Adult Hamsters. Brain Research 525:45-58.

Hegarty, C.M., Jonassen, J.A., and Bittman, E.L. (1990). Influences of Photoperiod and Testosterone on Pituitary Hormone Gene Expression in Golden Hamsters. Journal of Neuroendocrinology 5:567-573.

Bittman, E.L., and Weaver, D.R. (1990). Distribution of Melatonin Receptors in Neuroendocrine Tissues of the Ewe. Biology of Reproduction 43:986-993.

Bittman, E.L., Bartness, T.J., Goldman, B.D., and DeVries, G.J., (1991). Suprachiasmatic and Paraventricular Control of Photoperiodism in Siberian Hamsters. American Journal of Physiology 260:R90-101.

Bartness, T.J., Goldman, B.D., and Bittman, E.L. (1991). Suprachiasmatic Lesions Block Responses to Melatonin in Siberian Hamsters. American Journal of Physiology 260:R102-112.

Lehman, M.N., Silver, R., and Bittman, E.L. (1991). Anatomy of Suprachiasmatic Nucleus Grafts. In: Klein, D.C., Moore,R.Y., and Reppert, S.M. (editors), Suprachiasmatic Nucleus:The Mind's Clock. Oxford University Press, N.Y.(pp. 349-374).

Bittman, E.L., Jonassen, J.A., and Hegarty, C.M. (1992). Influences of Photoperiod and Estradiol on Pulsatile LH Secretion and Adenohypophyseal Gene Expression in Ovariectomized Golden Hamsters. Biology of Reproduction, 47:66-71.

Bittman, E.L. (1992). Melatonin: A durational signal regulating steroid-dependent and -independent aspects of limbic and hypophyseal function. In: Y. Touitou (editor), Melatonin and the Pineal Gland: From Basic Science to Clinical Application. Excerpta Medica, Amsterdam, pp. 151--158.

Bittman, E.L. (1993). The Sites and Consequences of Melatonin Binding in Mammals. Amer. Zool. 33:200-211.

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Bartness, T.J., Goldman, B.D., Hastings, M.H., Powers, J.B., and Bittman, E.L. (1993). The Timed-Infusion Paradigm : What has it taught us about melatonin action? J. Pineal Research 15:161-190.

Tubbiola, M.L., and Bittman, E.L. (1994) Steroidal and photoperiodic regulation of opiate binding in male golden hamsters. Journal of Neuroendocrinology 6:317-322.

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Maywood E.S., Bittman, E.L., Ebling, F.J.P., Barret, P., Morgan, P., and Hastings, M.H. (1995). Regional distribution of iodomelatonin binding sites within the suprachiasmatic nucleus of the Syrian hamster and the Siberian hamster. J. Neuroendocrinology 7:215-225.

De la Iglesia, H.O., Blaustein, J.D., and Bittman, E.L. (1995). The suprachiasmatic area in the female hamster projects to neurons containing estrogen receptors and GnRH. NeuroReport 6:1715-1722.

Tubbiola, M.L., and Bittman, E.L. (1995). Short days increase sensitivity to methadone inhibition of male copulatory behavior. Physiology and Behavior 58:647-651.

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Bittman, E.L., Jetton, A.E., Villalba, C., and DeVries, G.J. (1996). Effects of photoperiod and androgen on pituitary function and neuropeptide staining in Siberian hamsters. Amer. J. Physiol. 271:R64-72.

Jetton, A.E., Matsumoto, S.I., Meyer, E.L., and Bittman, E.L. (1996). Photosensitivity in juvenile Siberian hamsters: A comparison of steadily increasing or decreasing photoperiods with abrupt changes in daylength. Biol. Reprod. (submitted).

Matsumoto, S., Jetton, A., Basil, J., Watt, J.M., Lehman, M.N. , and Bittman, E.L.(1996). Control of Phase and Period of Circadian Rhythms Restored by Suprachiasmatic Grafts. J. Biological Rhythms 11:145-162.

Powers, J.B., Jetton, A.E., Mangels, R.A., and Bittman, E.L. (1997). Effects of photoperiod duration and melatonin signal characteristics on the reproductive systems of male Syrian hamsters. J. Neuroendocrinology 9:451-466.

Vernadakis, A.J, Bemis, W.E., and Bittman, E.L. (1998). Localization and partial characterization of melatonin receptors in amphioxus, hagfish, lamprey and skate. General and Comparative Endocrinology 110:67-78.

Huang, L., DeVries, G.J., and Bittman, E.L. (1998). Photoperiod regulates BrdU labeling in the brain of the adult golden hamster, a seasonally breeding mammal. J. Neurobiology 36:410-420.

Meyer-Bernstein, E.L., Jetton, A.E., Matsumoto, S.-I., Markuns, J.F., Lehman, M.N., and Bittman, E.L. 1999. Effects of Suprachiasmatic Transplants upon Circadian Rhythms of Neuroendocrine Function in Golden Hamsters. Endocrinology 140:207-218.

Bittman, E.L., Tubbiola, M.L., Foltz, G., and Hegarty, C.M. (1999). Effects of photoperiod and androgen on pro-opiomelanocortin gene expression in the arcuate nucleus of golden hamsters. Endocrinology 140:197-206.

de la Iglesia, H.O., Blaustein, J.D., and Bittman, E.L. (1999). Estrogen receptor-immunoreactive neurons project to the suprachiasmatic nucleus of the female Syrian hamster. J. Neuroendocrinology 11:481-490.

Song C.K., Bartness, T.J., Petersen, S.L., and Bittman, E.L. (2000). Co-expression of melatonin (MEL_{1a}) receptor and arginine vasopressin mRNAs in the Siberian hamster suprachiasmatic nucleus. J. Neuroendocrinology, . J. Neuroendocrinology 12:627-634.

Fukuhara, C., Brewer, J.M., Dirden, J.C., Bittman, E.L., Tosini G., and Harrington, M.E., 2001. Neuropeptide Y rapidly reduces Period 1 and Period 2 mRNA levels in the hamster suprachiasmatic nucleus. Neuroscience Letters 314:119-122.

Huang, L., and Bittman, E.L. (2002). Olfactory bulb cells generated in adult male golden hamsters are specifically activated by exposure to estrous females. Hormones and Behavior, 41:343-50.