NANCY G. FORGER
Department of Psychology
University of Massachusetts
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Degrees: B.A., 1981, Psychology and Mathematics, Summa Cum Laude
Dartmouth College, Hanover, New Hampshire

M.A., 1984, Psychology,*University of California, Berkeley*

Ph.D., 1986, Endocrinology, *University of California, Berkeley*

Honors & Awards:

Dickenson Prize for undergraduate research, 1981.
National Science Foundation Predoctoral Fellowship, 1981-1984.
University of California Graduate Fellowship, 1984-1985.
National Institutes of Health FIRST Award, 1995-2000.
Lilly Teaching Fellowship, 1996-1997.
National Institutes of Health Independent Scientists Award, 1997-2002.
Distinguished Teaching Award Nominee, 1998.

Employment:

University of California, Berkeley, Postdoctoral Associate (1986 - 1992), Assistant Research Psychologist and Instructor (1992 - 1994).

University of Massachusetts, Amherst, Associate Professor (1994 - 1999), Professor (2000 - present). Department of Psychology, Neuroscience and Behavior Program, Molecular and Cellular Biology Program, Center for Neuroendocrine Studies. Associate Director of the Neuroscience and Behavior Graduate Program (1999 – present).

Professional Affiliations:

Society for Neuroscience (1984 - present)
American Association for the Advancement of Science (1993 - present)
Society for Behavioral Neuroendocrinology (1996 - present)
Advisory Board, Society for Behavioral Neuroendocrinology (2001 – present)

Research Grants and Awards

"Mechanisms of sexual differentiation in neural systems," National Institutes of Health FIRST Award, NICHD, 4/1/95 - 5/31/2000, $531,935 (total).

"The role of trophic factors in the generation of neural sex differences," The Whitehall Foundation, 4/26/95 - 4/25/98, $92,000 (total).

"Independent Scientist Award," National Institutes of Health, NICHD, 7/1/97 - 6/30/2002, $359,316 (a career development award that pays my salary).

"The role of trophic factors in the generation of neural sex differences," The Whitehall Foundation, 6/15/98 - 6/14/2000, $88,000 (total).

"Mechanisms of sexual differentiation in neural systems," National Institutes of Health R01 award, 6/1/2000 - 5/31/2005, $1,017,000 (total).

Publications:

Forger, N.G. and Morin, L.P. (1981) Reproductive state modulates ethanol intake in rats: Effects of ovariectomy, ethanol concentration, estrous cycle and pregnancy. *Pharm., Biochem. & Behavior* 17: 323-331.

Morin, L.P. and Forger, N.G. (1981) Endocrine control of ethanol intake by rats or hamsters: relative contributions of the ovaries, adrenals and steroids. *Pharm. Biochem, & Behavior* 17: 529-537.

Forger, N.G. and Nelson, R.J. (1983) Rhythms of barbiturate-induced sleep time in deermice entrained to non-twentyfour hour photocycles. *Physiol. Behav.* 31: 379-383.

Dark, J., Forger, N.G. and Zucker, I. (1984) Rapid recovery of body mass after surgical removal of adipose tissue in ground squirrels. *Proc. Natl. Acad. Sci.* 81: 2270-2272.

Forger, N.G. and Zucker, I. (1985) Photoperiodic regulation of reproductive development in male white-footed mice (*Peromyscus leucopus*) born at different phases of the breeding season. *J. Reprod. Fert.* 73 : 271-278.

Dark, J., Forger, N., Stern, J. and Zucker, I. (1985) Recovery of lipid mass after removal of adipose tissue in ground squirrels. *Am. J. Physiol.* 249: R73-R78.

Forger, N.G., Dark, J. and Zucker, I. (1986) Recovery of white adipose tissue after lipectomy in female ground squirrels. *Can. J. Zool.* 64:128-131.

Forger, N.G., Dark, J., Barnes, B.M. and Zucker, I. (1986) Fat ablation and food restriction influence reproductive development and hibernation in ground squirrels. *Biol. Reprod.* 34:831-840.

Forger, N.G. and Breedlove, S.M. (1986) Sexual dimorphism in human and canine spinal cord: Role of early androgen. *Proc. Natl. Acad. Sci.* 83:7527-7531.

Dark, J., Forger, N.G. and Zucker, I. (1986) Regulation and function of lipid mass during the annual cycle of the golden-mantled ground squirrel, in *Living in the Cold*, Heller, H.C. et.

al., eds., Elsevier Publishers.

Forger, N.G. and Breedlove, S.M. (1987). Seasonal variation in mammalian striated muscle mass and motoneuron morphology. *J. Neurobiol.* 18: 155-165.

Forger, N.G. and Breedlove, S.M. (1987) Motoneuronal death during human fetal development. *J. Comp. Neurol.* 264: 118-122.

Forger, N.G., Dark, J., Stern, J.S., Wade, G.N. and Zucker, I. (1988) Lipectomy influences white adipose tissue lipoprotein lipase activity and plasma triglyceride levels in ground squirrels. *Metabolism* 37: 782-786.

Leslie, M., Forger, N.G. and Breedlove, S.M. (1991) Does androgen affect axonal transport of choleratoxin HRP in spinal motoneurons? *Neurosci. Letts.* 126:199-202.

Leslie, M., Forger, N.G. and Breedlove, S.M. (1991) Sexual dimorphism and androgen effects on spinal motoneurons innervating the rat flexor digitorum brevis. *Brain Res.* 561:269-273.

Forger, N.G., Fishman, R.B. and Breedlove, S.M. (1992) Differential effects of testosterone metabolites upon the size of sexually dimorphic motoneurons in adulthood. *Hormones and Behavior*, 26:204-213.

Forger, N.G. and Breedlove, S.M. (1992) Steroid influences on a mammalian neuromuscular system. *Seminars in the Neurosci.*, 3:459-468.

Forger, N.G., Hodges, L.L., Roberts, S. and Breedlove, S.M. (1992) Regulation of motoneuron death in the spinal nucleus of the bulbocavernosus. *J. Neurobiol.* 23:1192-1203.

Forger, N.G., Hodges, L. and Breedlove, S.M. (1993). The ontogeny of calcitonin gene-related peptide immunoreactivity in rat lumbar motoneurons: Delayed appearance and sexual dimorphism in the spinal nucleus of the bulbocavernosus. *J. Comp. Neurol.* 330:514-520.

Forger, N.G., Roberts, S.L., Wong, V. and Breedlove, S.M. (1993) Ciliary neurotrophic factor rescues rat motoneurons during developmental cell death. *J. Neurosci.* 13:4720-4726.

Forger, N.G., Wong, V. and Breedlove, S.M. (1995) Ciliary neurotrophic factor arrests muscle and motoneuron degeneration in androgen-insensitive rats. *J. Neurobiology,* 26: 354-362.

Bengston, L., Lopez, V., Watamura, S., and Forger, N.G. (1996) Short- and long-term effects of ciliary neurotrophic factor on androgen-sensitive motoneurons in the lumbar spinal cord. *J. Neurobiol.*, 31:263-273.

Forger NG, Galef BG, and Clark MM (1996) Intrauterine position affects motoneuron number and muscle size in a sexually dimorphic neuromuscular system. *Brain Research*, 735:119-124.

Forger NG, Frank L, Breedlove SM, and Glickman S (1996) Sexual dimorphism of perineal muscles and motoneurons in spotted hyenas. *J. Comp. Neurol.*, 375:333-343.

Forger NG, Howell ML, Bengston L, MacKenzie L, DeChiara TM, and Yancopoulos GD (1997) Sexual dimorphism in the spinal cord is absent in mice lacking the ciliary neurotrophic factor receptor. *J. Neuroscience*, 17:9605-9612.

Xu J, and Forger NG (1998) Expression and androgen regulation of the ciliary neurotrophic factor receptor (CNTFRα) in muscles and spinal cord. *J. Neurobiol.*, 35:217-229.

Drea CM, Weldele ML, Forger NG, Coscia EM, Frank L, Licht P, and Glickman SE (1998) Androgens and masculinization of genitalia in the spotted hyaena (*Crocuta crocuta*): 2. Effects of prenatal anti-androgens. *J. Reprod. Fertil.*, 113:117-127.

Forger NG, Wagner CK, Contois M, Bengston L, and MacLennan AJ (1998) Ciliary neurotrophic factor receptor α (CNTFRα) in spinal motoneurons is regulated by gonadal hormones. *J. Neuroscience,* 18:8720-8729.

Forger NG (1999) Psychological Sexual Differentiation, in Encyclopedia of Reproduction, E. Knobil and J. D. Neill, editors, Academic Press, pp. 421-430.

Park JJ, Howell M, Winseck A, and Forger NG (1999) Effects of testosterone on the development of a sexually dimorphic neuromuscular system in ciliary neurotrophic factor receptor knockout mice. *J. Neurobiology*, 41:317-325.

Fenstemaker SB, Zup SL, Frank LG, Glickman SE, and Forger NG (1999) A Sex difference in the hypothalamus of spotted hyenas. *Nature Neuroscience*, 2:943-945.

Varela CR, Bengston L, Xu J, MacLennan AJ, and Forger NG (2000) Additive effects of ciliary neurotrophic factor and testosterone on motoneuron survival; Differential effects on motoneuron size and muscle morphology. *Exp. Neurol.*, 165:384-393.

Peroulakis, M.E., and Forger, N.G. (2000) Ciliary neurotrophic factor increases muscle fiber number in the developing levator ani muscle of female rats. *Neurosci. Letts.*, 296:73-76.

Xu J, Gingras KM, Bengston L, Di Marco A, and Forger NG (2001) Blockade of endogenous neurotrophic factors prevents the androgenic rescue of rat spinal motoneurons. *Journal of Neuroscience*. 21:4366-4372.

Forger, NG (2001) The development of sex differences in the nervous system. In: The Handbook of Behavioral Neurobiology, Vol. 13: Developmental Psychobiology . E. Blass, editor, Plenum, New York, pp. 153-208.

Peroulakis, ME, Goldman, B, and Forger, NG (2002) Perineal muscles and motoneurons are sexually monomorphic in the naked mole-rat (*Heterocephalus glaber*). J. Neurobiol., 51:33-42.

Zup SL, and Forger NG (2002) Hormones and sexual differentiation. In: Encyclopedia of the Human Brain, V.S. Ramachandran, editor, Academic Press, pp 323-341.

Park JJ, Zup, SL, Verhovshek, T, Sengelaub DR, Forger NG (2002) Castration reduces motoneuron soma size but not dendritic length in the spinal nucleus of the bulbocavernosus of wild-type and Bcl-2 overexpressing mice. *J. Neurobiol*, in press.

Zup SL, Forger NG (2002) Testosterone regulates Bcl-2 immunoreactivity in a sexually-dimorphic motor pool of adult rats. *Brain Res*, in press.

Zup SL, Carrier H, Waters, EM, Tabor A, Bengston L, Rosen GJ, Simerly RB, Forger NG (2002?) Overexpression of Bcl-2 reduces sex differences in neuron number in the brain and spinal cord. *Submitted*.