

CURRICULUM VITAE

Jordan, Cynthia L. Professor
Department of Psychology and Neuroscience Program
Michigan State University
East Lansing, Michigan, 48824
(517) 355-1722 (office); 432-1674 (lab)
jordancy@msu.edu

Education: B.A., Honours, With Distinction, Psychology,
Concordia University, Montreal, Quebec, Canada, 1980.

M.A., Psychology/Physiological
University of California, Los Angeles, 1983.

Ph.D., Psychology/Physiological
University of California, Los Angeles, 1988.
minors in **Developmental Neurobiology, Neuroanatomy**

Thesis: The effects of gonadal hormone on neuromuscular synapse elimination.

Honors, Awards and Research grants:

1980 National Sciences and Engineering Research Council Undergraduate Summer Research Award.
1981-1985 National Institute of Health Predoctoral Traineeship, Brain Research Institute, University of California, Los Angeles.
1987 Alumni Association Distinguished Scholar Award, University of California, Los Angeles.
1989-1992 National Institute of Health Individual Research Service Award
1992-1993 National Science Foundation Research Planning Grant, "The site of androgen action on synapse elimination."
1992-1993 National Science Foundation "Research Experience for Undergraduates" Award.
1993-1998 National Science Foundation "The Neuroscience Young Scientist Award" for 1993, IBN-9309856, "The site of androgen action on synapse elimination."
1996-1997 National Science Foundation "Research Experience for Undergraduates" Award.
1999-2000 National Science Foundation "Research Experience for Undergraduate" Award.
1999-2002 National Science Foundation, IBN-9818425, "Schwann cells as potential androgen targets."
2002 – 2005 National Institute of Health, NS045195, "Androgen targets in a simple behavioral system"
2006- 2009 National Institute of Health, NS045195, "Androgen targets in a simple behavioral system"
2006- 2008 National Science Foundation, IOB-0608622 (Co-PI) "Summer school of behavioral neuroendocrinology"
2010- 2015 National Institute of Health, NS045195, "Androgen targets in a simple behavioral system" (score=10, received expedited funding)

Professional Society Membership:

1980-present Society for Neuroscience
1997-present Society for Behavioral Neuroendocrinology

Cynthia L. Jordan, Ph.D.

Fields of Research:

Neural basis of behavior; Neuroplasticity; Development of the Nervous System; Hormones and Behavior; Neuroanatomy; Sex Differences in the Nervous System; Neurodegenerative Disease

Training:

- 1978-1980 Undergraduate research in Dr. Peter Shizgal's laboratory at Concordia University on brain mechanisms underlying motivation.
Training in stereotaxic surgery, training animals in brain self-stimulation and behavioral assessment.
- 1980-1981 Research Technician for Dr. Arnold, Dept. of Psychology, University of California, Los Angeles.
Training in tract tracing techniques, morphometric analysis of brain and spinal cord neurons, thymidine autoradiography and basic histological procedures.
- 1981-1987 Graduate research with Drs. Arthur Arnold (Dept. Psychology) and Michael Letinsky (Dept. Physiology and Jerry Lewis Neuromuscular Research Center) at the University of California, Los Angeles.
Training in staining of neuromuscular synapses, intracellular recording of muscle synaptic endplate potentials, steroid autoradiography, photomicrography and endocrinological surgery.
- 1988-1992 Postdoctoral research training with Drs. Wesley Thompson (Dept. Zoology, University of Texas, Austin), Alan Grinnell (Dept. Physiology and Director of the Jerry Lewis Center at University of California, Los Angeles) and Marc Breedlove (Dept. Psychology, University of California, Berkeley).
Training in motor unit and synaptic physiology and basic immunohistochemical techniques.
- 1992-1993 Assistant Research Psychologist, University of California, Los Angeles and Berkeley.
Training in basic electron microscopic techniques, including training in the use of both low and intermediate voltage transmission electron microscopes (taught at UC Berkeley by Caroline Schooley, Facility Supervisor of the Electron Microscope Laboratory).
- 1994-1996 Assistant Research Psychologist, University of California, Berkeley.
Training in neural imaging techniques. I attended a summer course in 1994 at Cold Spring Harbor Laboratories (*Imaging Structure and Function in the Nervous System*) that provided training in basic and modern light microscopic techniques, with an emphasis on image processing techniques combined with light-sensitive and vital stains which allow study of both the morphology and function of living neurons and their synapses.
- 2004 Associate Professor, MSU
Training in molecular biology (New England Biolab Molecular Biology Summer Workshop, two week course at Smith College)

Employment:

- 2008 - Professor, Dept. Psychology and Neuroscience, Michigan State University
- 2003 - 2008 Associate Professor, Dept. Psychology and Neuroscience, Michigan State University
- 2001- 2003 Assistant Professor, Dept. Psychology and Neuroscience Program, Michigan State Univ.
- 1998-2001 Assistant Adjunct Professor, Dept. Psychology, Univ. California, Berkeley
- 1992-1997 Assistant Research Psychologist, Dept. Psychology, Univ. California, Berkeley and Los Angeles
- 1988-1992 Postdoctoral Fellow, Univ. California, Berkeley and Los Angeles

Services:

- Guest Editor for *Journal of Neurobiology* Special Issue “Glia and Steroids”, Vol. 40 (4), September 15, 1999.
 - Program Committee, Society for Behavioral Neuroendocrinology, 1997-1999.
 - Ad hoc reviews: NSF, J. Neurosci. J. Neurobiol., Eur. J. of Neurosci., Endocrinol., etc..
 - Advisory Board, Society for Behavioral Neuroendocrinology, 2003 – 2005.
 - NIH study section, Ad hoc reviewer, 2006
 - Summer School in Behavioral Neuroendocrinology (co-founder with Marc Breedlove): week long intensive course (lectures and lab exercises) for advanced undergraduates, with an emphasis toward recruiting minorities into science.
 - Guest Editor for *Hormones and Behavior* Special Issue “Androgens in Health and Disease: Novel Roles and Mechanisms of Action”, July, 2008.
-

Teaching Interests:

Laboratory Methods in Neuroscience; Developmental Neurobiology; Behavioral Neuroscience; Behavioral Endocrinology; Current challenges of women in science

Publications

Jordan, C.L., S.M. Breedlove and A.P. Arnold (1982). Sexual dimorphism and the influence of neonatal androgen in the dorsolateral motor nucleus of the rat lumbar spinal cord. *Brain Research*, 249, 309-314.

Breedlove, S.M., C.L. Jordan and A.P. Arnold (1983). Neurogenesis of motoneurons in the sexually dimorphic spinal nucleus of the bulbocavernosus in rats. *Developmental Brain Research*, 9, 39-43.

Arnold, A.P. and C.L. Jordan (1988). Hormonal organization of neural circuits. In L. Martini and W. F. Ganong (eds.) *Frontiers in Neuroendocrinology*, Vol. 10, pp185-213, Raven Press, New York.

Jordan, C.L., M.S. Letinsky and A.P. Arnold (1988). Synapse elimination occurs late in the hormone-sensitive levator ani muscle of the rat. *Journal of Neurobiology*, 19: 335-356.

Jordan, C.L., M.S. Letinsky and A.P. Arnold (1989). The role of gonadal hormones in neuromuscular synapse elimination in rats: I. Androgen delays the loss of multiple innervation in the levator ani muscle. *Journal of Neuroscience*, 9: 229-238.

Jordan, C.L., M.S. Letinsky and A.P. Arnold (1989). The role of gonadal hormones in neuromuscular synapse elimination: II. Multiple innervation persists in the adult levator ani after juvenile androgen treatment. *Journal of Neuroscience*, 9: 239-247.

Lee, J.H., C.L. Jordan and A.P. Arnold (1989). Critical period for the androgenic regulation of soma size of sexually dimorphic motoneurons in rat lumbar spinal cord. *Neuroscience Letters*, 98: 79-84.

Sengelaub, D.R. C.L. Jordan, E.M. Kurz and A.P. Arnold (1989) Hormonal control of neuron number in sexually dimorphic spinal nuclei of the rat: II. Development of the spinal nucleus of the bulbocavernosus in androgen insensitive (Tfm) rats. *Journal of Comparative Neurology*, 280: 630-636.

Jordan, C.L., M.S. Letinsky and A.P. Arnold (1990) Critical period for the androgenic block of neuromuscular synapse elimination. *Journal of Neurobiology*, 21: 760-767.

Arnold, A.P., C.L. Jordan, M. Sasaki, and J.L. Lubischer (1991) Androgen regulation of synaptic organization in sexually dimorphic motoneurons in rats: Effects on neuromuscular synapse elimination and afferent inputs to the motoneurons. In A. Wernig (ed.) *Plasticity of motoneuronal connections--*

Cynthia L. Jordan, Ph.D.

peripheral and central, pp 299-308, Elsevier Press.

Jordan, C.L., S.M. Breedlove, and A.P. Arnold (1991) Ontogeny of steroid accumulation in spinal lumbar motoneurons of the rat: Implications for androgen's site of action during synapse elimination, *Journal of Comparative Neurology*, 313: 441-448.

Lubischer, J., C. L. Jordan, and A.P. Arnold (1992) Transient and permanent effects of androgen during synapse elimination in the levator ani muscle of the rat. *Journal of Neurobiology*, 23: 1-9.

Jordan, C.L., P. Pawson, A.P. Arnold and A.D. Grinnell (1992) Hormonal regulation of motor unit size and synaptic strength during synapse elimination in the rat levator ani muscle. *Journal of Neuroscience*, 12: 4447-4459.

Hodges, L., C.L. Jordan and S.M. Breedlove (1993) Hormone-sensitive periods for the control of motoneuron number and soma size in the dorsolateral nucleus of the rat spinal cord. *Brain Research*, 602: 187-190.

Jordan, C.L., S. Watamura and A.P. Arnold (1995) Androgenic, not estrogenic, steroids alter neuromuscular synapse elimination in the rat levator ani muscle. *Developmental Brain Research*, 84: 225-232.

Jordan, C.L. (1996a) Ciliary neurotrophic factor may act in target musculature to regulate developmental synapse elimination. *Developmental Neuroscience*, 18: 185-198.

Jordan, C.L. (1996b) Morphological effects of ciliary neurotrophic factor during neuromuscular synapse elimination. *Journal of Neurobiology*, 31: 29-40.

Jordan, C.L., B. Padgett, J. Hershey, G. Prins, and A.P. Arnold (1997) Ontogeny of androgen receptor immunocytochemistry in lumbar motoneurons and in the sexually dimorphic levator ani muscle of male rats. *Journal of Comparative Neurology*, 379: 88-98.

Jordan, C.L. (1997) Androgen receptor (AR) immunoreactivity in rat pudendal motoneurons: Implications for accessory proteins. *Hormones and Behavior*, 32: 1-10.

Jordan, C.L. and Garcia-Segura, L.M. (1999) Introduction to the *Journal of Neurobiology* Special Issue "Glia and Steroids". *Journal of Neurobiology*, 40: 433.

Jordan, C.L. (1999) Glia as mediators of steroid hormone action on the nervous system: An overview. *Journal of Neurobiology*, 40: 434-445.

S.E. Christensen, S.M. Breedlove and C.L. Jordan (1999) Sexual differentiation of a neuromuscular system. In *Sexual Differentiation of the Brain*, A. Matsumoto, ed., CRC Press, Boca Raton, FL., pp 149-173.

Breedlove, S.M., B.M. Cooke and C.L. Jordan (1999) The orthodox view of sexual differentiation of the brain. *Brain, Behavior and Evolution*, 54: 8-14.

Williams T.J., M.E. Pepitone, S.E. Christensen, B.M. Cooke, A.D. Huberman, N.J. Breedlove, T.J.

Breedlove, C.L. Jordan and S.M. Breedlove (2000) Finger-length ratios and sexual orientation. *Nature*, 404 (6777): 455-6.

Jordan, C.L., and T. Williams (2001) Testosterone regulates terminal Schwann cell number and junctional size during developmental synapse elimination. *Developmental Neuroscience*, 23: 441-451.

Cynthia L. Jordan, Ph.D.

Breedlove, S.M. and C.L. Jordan (2001) The increasingly plastic, hormone-responsive adult brain. *Proceeding of the National Academy of Science*, 98(6): 2956-7.

Lieberman AP, D.L. Friedlich, G. Harmison, B.W. Howell, C.L. Jordan, S.M. Breedlove, K.H. Fischbeck (2001) Androgens regulate the mammalian homologues of invertebrate sex determination genes *tra-2* and *fox-1*. *Biochemical and Biophysical Research Communications*, 282(2): 499-506

Breedlove, S.M., C.L. Jordan & D.B. Kelley (2002) What studies of neuromuscular systems tell us about sexual differentiation of brain and behavior. *Hormones, Brain and Behavior*, D.W. Pfaff, (Ed). Vol. 4, 193-222.

Hegstrom, C.D., C.L. Jordan and S.M. Breedlove (2002) Photoperiod and androgens act independently to induce spinal nucleus of the bulbocavernosus neuromuscular plasticity in the Siberian hamster, *Phodopus sungorus*. *Journal of Neuroendocrinology*, 14(5): 368-74

Jordan, C.L., R.H. Price, Jr., M. Bollnow and R.J Handa (2002) Androgen receptor messenger RNA and protein in adult rat sciatic nerve: Implications for site of androgen action. *Journal of Neuroscience Research*, 69(4): 509-18.

Xiao, L., and C.L. Jordan (2002) Sex differences and laterality of androgen receptor immunoreactivity in rat hippocampus. *Hormones and Behavior*, 42(3):327-36.

Jordan, C.L., S.E. Christensen, R.J. Handa, J.L. Anderson, W.A. Poulitor, and S.M. Breedlove (2002) Evidence that androgen acts through N-methyl-D-aspartate receptors to affect motoneurons in the rat spinal nucleus of the bulbocavernosus. *Journal of Neuroscience*, 22(21):9567-72.

Baltatu, O., C. Cayla, R. Iliescu, D. Andreev, C. Jordan, and M. Bader (2002) Abolition of hypertension-induced end-organ damage by androgen receptor blockade in transgenic rats harboring the mouse *Ren-2* gene. *Journal of the American Society of Nephrology*, 13(11):2681-7.

Cooke, B.M., S. M. Breedlove and C.L. Jordan (2003) Both estrogen receptors and androgen receptors contribute to testosterone-induced changes in the morphology of the medial amygdala and sexual arousal in males rats. *Hormones and Behavior*, 43(2):336-46.

Park, J.H., E.M. Spencer, N.J. Place, C.L. Jordan and I. Zucker (2003) Seasonal control of penile development of Siberian hamsters (*Phodopus sungorus*) by daylength and testicular hormones. *Reproduction*, 125(3):397-407.

Monks, D.A., J. Xu, B.W. O'Malley, and C.L. Jordan (2003) Steroid receptor coactivator-1 is not required for androgen mediated sexual differentiation of spinal motoneurons. *Neuroendocrinology*, 78(1):45-51.

Muscat, L, A.D. Huberman, C.L. Jordan and L.P Morin (2003) Crossed and uncrossed retinal projections to the hamster circadian system. *Journal of Comparative Neurology*, 466(4):513-24.

Morris, J.A., K.L. Gobrogge, C.L. Jordan and S.M. Breedlove (2003) Brain aromatase: dyed-in-the-wool homosexuality. *Endocrinology*, 145(2):475-7.

Monks, D.A., E. O'Bryant, and C.L Jordan (2004) Androgen receptor immunoreactivity in skeletal muscle: enrichment at the neuromuscular junction. *Journal of Comparative Neurology*, 473: 59-72.

Fix, C., C. Jordan, P. Cano and W.H. Walker (2004) Testosterone activates MAP kinase and the CREB

Cynthia L. Jordan, Ph.D.

transcription factor in sertoli cells. *Proceeding of the National Academy of Science*, 101(30):10919-24.

Johansen, J., C.L. Jordan and S.M. Breedlove (2004) Steroid masculinization of neural structure in rats: a tale of two nuclei (2004) *Physiology and Behavior*, 83(2):271-7.

Morris, J.A., C.L. Jordan and S.M. Breedlove (2004) Sexual differentiation of the vertebrate nervous system. *Nature Neuroscience*, 7(10):1034-9.

Garcia_Falgueros, A., H. Pinos, P. Collado, E. Psaro, R. Fernandez, C.L. Jordan, S. Segovia, and A. Guillamon (2005) The role of the androgen receptor in CNS masculinization, *Brain Research*, 1035(1): 13-23.

O'Bryant, E.L. and C.L. Jordan (2005) Expression of steroid-receptor coactivators in androgen-responsive and -unresponsive motoneurons. *Hormones and Behavior*, 47 (1): 29-38.

Morris, J.A., C.L. Jordan, B.D. Dugger and S.M. Breedlove (2005) The posterodorsal medial amygdala is partially demasculinized in adult male (XY) rats with the testicular feminization mutation, *Journal of Comparative Neurology*, 487(2): 217-226.

Monks, D.A., W. Kopachik, S.M. Breedlove and C.L. Jordan (2006) Anabolic responsiveness of skeletal muscles correlates with levels of androgen receptor protein but not androgen receptor mRNA. *Canadian Journal of Physiology and Pharmacology*, 84(2): 273-277.

MacLusky, N.J., T. Hajszan, J.A. Johansen, C.L. Jordan and C. Leranth (2006) Androgen effects on hippocampal CA1 spine synapses numbers are retained in *Tfm* male rats with defective androgen receptors. *Endocrinology*, May;147(5): 2392-8.

Puts, D.A., C.L. Jordan and S.M. Breedlove (2006) Defending the brain from estrogen. *Proceeding of the National Academy of Science*, 9(2): 155.

Puts, D.A., C.L. Jordan and S.M. Breedlove (2006) O brother, where art thou? The fraternal birth-order effect on male sexual orientation. *Proceeding of the National Academy of Science*, 103 (28): 10531-10532.

Yu Z., N. Dadgar, M. Albertelli, K. Gruis, C. Jordan, D.M. Robins and A.P. Lieberman (2006) Androgen-dependent pathology demonstrates myopathic contribution to the Kennedy disease phenotype in a mouse knock-in model. *The Journal of Clinical Investigation*, 116 (10):2663-2672.

Zuloaga, D.G., J.A. Morris, D.A. Monks, S.M. Breedlove and C.L. Jordan (2007) Androgen-sensitivity of spinal nucleus of the bulbocavernosus (SNB) motoneurons in male C57BL6J mice. *Hormones and Behavior*, 51:207-212.

Dugger, B.N., J.A. Morris, C.L. Jordan, and S.M. Breedlove (2007) Androgen receptors are required for full masculinization of the Ventromedial Hypothalamus (VMH) in rats. *Hormones and Behavior*, 51:195-201.

Hajszan, T., N.J. MacLusky, J.A. Johansen, C.L. Jordan and C. Leranth (2007) Effects of androgen and estrogens on spine synapse formation in the prefrontal cortex of normal and *Tfm* male rats, *Endocrinology*, 148(5):1963-7.

Holmes, M.M., G.J. Rosen, C.L. Jordan, G.J. de Vries, B.D. Goldman and N.G. Forger (2007) Social control of brain morphology in an eusocial mammal. *Proceeding of the National Academy of Science*,

Cynthia L. Jordan, Ph.D.

104(25):10548-52.

Ottewill, E.N., L.A. Beck, C.L. Jordan, S.M. Breedlove (2007) Androgen-dependent regulation of brain-derived neurotrophic factor and tyrosine kinase B in the sexually dimorphic the spinal nucleus of the bulbocavernosus (SNB), *Endocrinology*, 148(8):3655-65.

Durazzo, A., J.A. Morris, S.M. Breedlove, C.L. Jordan (2007) Effects of the Testicular Feminization Mutation (TFM) of the Androgen Receptor Gene on BNSTpm Volume and Morphology in Rats. *Neuroscience Letters*, 419(2):168-71.

Johansen, J.A, S.M. Breedlove and C.L. Jordan (2007) Androgen receptor expression in the levator ani muscle of male mice. *Journal of Neuroendocrinology*, 19(10):823-6.

Cooke, B. C.L. Jordan and S.M. Breedlove (2007) Pubertal growth of the medial amygdala delayed by short photoperiods in the Siberian hamster, *Phodopus sungorus*. *Hormones and Behavior*, 52(3):283-8.

Monks, D.A., J.A. Johansen, K. Mo, P. Rao, B. Eagleson, Z. Yu, A.P. Lieberman, S. M. Breedlove, and C.L. Jordan (2007) Overexpression of wildtype androgen receptor in muscle recapitulates polyglutamine disease, *Proceeding of the National Academy of Science*, 104 (46): 18259 – 18264.

Morris, J.A., C. L. Jordan, and S.M. Breedlove (2008) Sexual dimorphism in neuronal number of the posterodorsal medial amygdala is independent of circulating androgens and regional volume in adult rats, *Journal of Comparative Neurology*, 506(5):851-9.

Puts, D.A., M.A. McDaniel, C.L. Jordan, S.M. Breedlove (2008) Spatial ability and prenatal androgens: meta-analyses of CAH and digit ratio (2D:4D) studies. *Archives of Sexual Behavior*, 37(1):100-11.

Morris, J.A., C.L. Jordan, Z.A. King, K.V., Northcutt and S.M. Breedlove (2008) Sexual dimorphism and steroid responsiveness of the posterodorsal medial amygdala in adult mice, *Brain Research*, 1190:115-21.

Dugger, B.N., J.A. Morris, C.L. Jordan and S.M. Breedlove (2008) Gonadal steroids regulate neural plasticity in the sexually dimorphic nucleus of the preoptic area of adult male and female rats. *Neuroendocrinology*, 88(1):17-24.

Zuloaga, D.G., D.A. Puts, C.L. Jordan, S.M. Breedlove (2008) The role of androgen receptors in the masculinization of brain and behavior: what we've learned from the testicular feminization mutation. *Hormones and Behavior*, 53(5):613-26.

Zuloaga, D. G., Jordan, C. L., & Breedlove, S. M. (2008). Sexual differentiation of the brain. In Squire, L. R. (ed) *New Encyclopedia of Neuroscience*. Oxford, England: Elsevier.

Jordan, C.L. and L. DonCarlos (2008) Androgens in health and disease: an overview. *Hormones and Behavior*, 53(5):589-95.

Sakamoto, H., L. Matsuda, D.G. Zuloaga, H. Hongu, E. Wada, K. Wada, C.L. Jordan, S.M. Breedlove, and M. Kawata (2008) Sexually dimorphic gastrin releasing peptide system in the spinal cord controls male reproductive functions. *Nature Neuroscience*, 11(6):634-6.

Jordan, C.L. and A.P. Lieberman (2008) Spinal and Bulbar Muscular Atrophy: A motoneuron or muscle disease? *Current Opinions in Pharmacology*, 8(6): 752-8.

Johnson, R.T., S.M. Breedlove and C.L. Jordan (2008) Sex Differences and Laterality in Astrocyte

Cynthia L. Jordan, Ph.D.

Number and Complexity in the Adult Rat Medial Amygdala. *Journal of Comparative Neurology*, 511(5):599-609.

Johansen, J.A. Z. Yu, K. Mo, D.A. Monks, A.P. Lieberman, S.M. Breedlove, C.L. Jordan (2009) Recovery of function in a myogenic mouse model of spinal bulbar muscular atrophy. *Neurobiology of Disease*, 34(1):113-20.

Sakamoto H, K. Takanami, D.G. Zuloaga, K.I. Matsuda, C.L. Jordan, S.M. Breedlove, M. Kawata M. (2009) Androgen Regulates the Sexually Dimorphic Gastrin-Releasing Peptide System in the Lumbar Spinal Cord That Mediates Male Sexual Function. *Endocrinology*, 150(8): 3672-9.

Sakamoto H, K. Matsuda, D.G. Zuloaga, N. Nishiura N, K. Takanami, C.L. Jordan, S.M. Breedlove, M. Kawata M. (2009) Stress affects a gastrin-releasing peptide system in the spinal cord that mediates sexual function: implications for psychogenic erectile dysfunction. *PLoS ONE*, 4(1):e4276. Epub 2009 Jan 26.

Hamson DK, Morris JA, Breedlove SM, Jordan CL. (2009) Time course of adult castration-induced changes in soma size of motoneurons in the rat spinal nucleus of the bulbocavernosus. *Neuroscience Letters*, 454: 148-151.

Puts DA, RA Cárdenas, DH Bailey, RP Burriss, CL Jordan and SM Breedlove (2010) Salivary testosterone does not predict mental rotation performance in men or women. *Hormones and Behavior*, 58: 282-289.

Sato SM, JA Johansen, CL Jordan, and RI Wood (2010) Membrane androgen receptors may mediate androgen reinforcement. *Psychoneuroendocrinology*, Feb 4.[Epub ahead of print].

Passpass S, CT Tiernan, B Behrouz , CL Jordan, SM Breedlove, JL Goudreau, and KJ. Lookingland (2010) Neonatal androgen-dependent sex differences in lumbar spinal cord dopamine concentrations and the number of A11 diencephalospinal dopamine neurons. *Journal of Comparative Neurology*, 518(13):2423-36.

Johnson, RT, SM Breedlove and CL Jordan (2010) Astrocytes in the Amygdala, *Vitamins and Hormones*, Volume 82:23-45.

Hamson, DK, CL Jordan and SM Breedlove (2010) The testosterone two-step in really a minuet. *Neuron*, 66:167-169.

Ottm, E. N., J. E. Poort, H. Wang, C. L. Jordan S. M. Breedlove (2010) Differential expression and regulation of brain-derived neurotrophic factor (BDNF) mRNA isoforms in androgen-sensitive motoneurons of the rat lumbar spinal cord, *Molecular and Cellular Endocrinology*, 328:40-46.

Johansen, JA, SM Troxell, Z Yu, K Mo, DA Monks, AP Lieberman, SM Breedlove and CL Jordan (2011) Prenatal flutamide enhances survival in a myogenic mouse model of spinal bulbar muscular atrophy, *Neurodegenerative Diseases*, 8: 25 – 34.

Zuloaga, D.G., C.L. Jordan and S.M. Breedlove (2011) The organizational role of testicular hormones and the androgen receptor in anxiety-related behaviors and sensorimotor gating in rats. *Endocrinology*, 152: 1572-81.

Cynthia L. Jordan, Ph.D.

Zuloaga DG, JE Poort J, CL Jordan, SM Breedlove (2011) Male rats with the testicular feminization mutation of the androgen receptor display elevated anxiety-related behavior and corticosterone response to mild stress. *Hormones and Behavior*, 60:380-8.

Kemp MQ, JL Poort, RM Baqri, AP Lieberman, SM Breedlove, KE Miller and CL Jordan (2011) Impaired motoneuronal retrograde transport in two models of SBMA implicates two sites of androgen action. *Human Molecular Genetics*, 20(22):4475-90.

Johnson, RT, A Schneider, LL DonCarlos, M Breedlove and CL Jordan (2011) Astrocytes in the rat medial amygdala are responsive to adult androgens. *Journal of Comparative Neurology*, in press.

Smith, M, DK Hamson, JE Poort, CL Jordan and M Breedlove (2012) Ontogeny of androgen receptor expression in spinal nucleus of the bulbocavernosus motoneurons and their target muscles in male mice. *Neuroscience Letters*, in press

Invited seminar or symposium speaker:

- Society of the Neuroscience (1989), “Androgen sensitivity of a simple neuromuscular system.” Symposium speaker
- Jordan, C.L. (1993) Developmental factors in sexually differentiated behaviors (Symposium Chair and speaker). *Conference on Reproductive Behavior*.
- University of Ottawa, 1999, “Sexual differentiation of a simple neural system”
- Jordan C.L. (2002) Steroids and Glia: An overview. *Hormones and Behavior Abstract*, 41: 449. (Invited speaker at *Society for Behavior Neuroendocrinology* meeting, June, 2002)
- Jordan, C.L. (2003) Origins of androgen sensitivity: novel sites of action. *XXXIII Annual Congress of the International Society of Psychoneuroendocrinology*, Pisa, Italy, (invited speaker, declined).
- Jordan, C.L. (2005) Mechanisms of steroid-induced plasticity. *3rd International Meeting Steroids and nervous system*. Torino, Italy. (invited speaker, declined)
- Ohio State (March, 2006) “Motoneuron Disease: motoneurons or muscle? A chicken or egg question.”
- University of Massachusetts, Amherst (November, 2006) “Motoneuron Disease: Challenging the Dogma” (invited speaker)
- Michigan State University (November, 2006) “Motoneuron Disease: Challenging the Dogma” (invited speaker)
- Duke University (January, 2007) “Motoneuron Disease: Challenging the Dogma” (invited speaker)
- University of Texas, Austin (March, 2008) “Motoneuron Disease: New direction for therapeutics” (invited speaker)
- Tulane University (February, 2009) “Kennedy’s Disease: Motoneuron or Muscle disease?” (invited speaker)
- Hope College (February, 2009) “Kennedy’s Disease: Motoneuron or Muscle disease?” (invited speaker)
- University of Michigan (September, 2011) “Motoneuron Disease: ‘whodunit’ and what happened?” (invited speaker)
- Michigan State University (October, 2011) “From Sex to Motoneuron Disease” (invited speaker)