

ELAINE M. HULL

Curriculum Vitae

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Florida State University
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EDUCATION:

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| Indiana University | Bloomington, IN | PhD | (1967) | Psychology |
| Austin College | Sherman, TX | B.A. | (1963) | Psychology |

EMPLOYMENT HISTORY:

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| 1967–1973 | State University of New York at Buffalo, Assistant Professor of Psychology |
| 1973–1986 | State University of New York at Buffalo, Associate Professor of Psychology |
| 1986–2004 | State University of New York at Buffalo, Professor of Psychology |
| 2003–2004 | State University of New York at Buffalo, Research Professor of Pharmacology and Toxicology |
| 2004–present | Florida State University, Professor of Psychology and Neuroscience |

RESEARCH INTERESTS:

My research program investigates the neuroendocrine control of male rat sexual behavior. We have shown that dopamine is released in the medial preoptic area (MPOA) as soon as a male rat encounters a receptive female; release is further increased during copulation. Stimulation of dopamine receptors in the MPOA controls genital reflexes and sexual motivation. This brain area is essential for male sexual behavior in all vertebrate species that have been studied, from fish through humans. Testosterone promotes copulation, in part, by up-regulating nitric oxide synthase in the MPOA; the resultant production of nitric oxide increases both basal and female-stimulated dopamine release. We have also shown that serotonin is released in the anterior lateral hypothalamus at the time of ejaculation and contributes to the postejaculatory sexual quiescence, in part by decreasing mesolimbic dopamine release. Recent research centers on the roles of dopamine and glutamate in the increase in sexual proficiency due to sexual experience. Similar mechanisms may underlie other forms of memory and drug addiction. Finally, we are interested in how the circuitry underlying sexual behavior is integrated with that subserving other motivated behaviors.

AWARDS AND HONORS:

Chancellor's Award for Excellence in Teaching, SUNY, 1975.
Student Association Excellence in Teaching Award, SUNY at Buffalo, 1986.
New York State/Union of University Professionals Excellence Award, 1990
Sustained Achievement Award, SUNY at Buffalo, 2002
Listed in Top 100 Grantees at University at Buffalo, 2002
Named Distinguished Alumna of Austin College, 2003
Phi Beta Kappa, Austin College, Awarded as a distinguished alumna, 2006
McGuffey Award in Humanities/Social Sciences, 2007 (with James W. Kalat, Jeffrey R. Stowell, Cynthia Crawford, Chris Hayashi, presented by Text and Academic Authors Association)

GRANT SUPPORT (since 1986, total costs):

\$1,297,371 (2007-2012) Hormone-Neurotransmitter Interactions in the Brain, NIMH \$225,000 direct costs in year 1 (2007-2008)
\$1,412,141 (2001–2007) Hormone-Neurotransmitter Interactions in the Brain, NIMH. \$175,000 direct costs in year 5 (2004–2007) (no-cost extension 5/1/06–4/30/07)

\$602,759 (2000–2006) Hormone-Neurotransmitter Interactions in the Brain, NIMH, Independent Scientist Award (salary support). \$112,230 direct costs in year 5 (2004–2005)
\$1,102,150 (1996–2001) Hormone-Neurotransmitter Interactions in the Brain, NIMH (competitive renewal of the previous grant, with a different title)
\$519,630 (1993–1996) Brain Regulation of Male Sex Behavior in Rats, NIMH
\$24,000 (1992–1993) Neurotransmitter Interactions in the Medial Preoptic Area, NSF
\$387,721 (1988–1992) Brain Dopamine Regulation of Male Sex Behavior in Rats, NIMH
\$147,500 (1986–1988) Brain Dopamine Regulation of Male Sex Behavior in Rats, NIMH

GRANT REVIEW SERVICE:

Member F02A NIH study section to review pre- and postdoctoral fellowship proposals
(June, 2003, to present)
Chair, F02A NIH study section, March–July, 2006
Member, Integrative, Functional and Cognitive Neuroscience-1 Study Section, NIH, (1998–2000)
Member, Psychology, Behavior, and Neuroscience Study Section, NIMH, (1996–1998)
Temporary member: Biopsychology Study Section, NIH (March 1997); Integrative,
Functional and Cognitive Neuroscience-2 Study Section, NIH, (June 1999; February 2000;
February 2003)
Member, special NIH study section to review proposals for centers for study of infertility (May 2002)
Member special NIH study section (August, 2002)
Chair, Special Review Panel, July 2004
Ad hoc reviewer of numerous NSF grants and NIMH Small Grants

EDITORIAL BOARD MEMBERSHIP:

Hormones and Behavior
Archives of Sexual Behavior
Co-editor of special issue of *Physiology & Behavior* on Male Sexual Behavior

ADVISORY BOARD MEMBERSHIP:

External Advisory Board for NIH Training Grant, University of Cincinnati Medical School, 2005–
present

RESEARCH SUPERVISION:

24 PhD dissertations chaired
19 MA theses chaired
Member of 61 PhD committees
24 undergraduate Honors theses chaired

MAJOR UNIVERSITY SERVICE (since 1986):

Member, President's Review Board for Promotion and Tenure, University at Buffalo, 1989–1992
President's Research Advisory Council, University at Buffalo, 1986–1989
Intercollegiate Athletics Board, University at Buffalo, 1995–1998
Executive Committee, Interdisciplinary Program in Neuroscience, University at Buffalo, 1990–1998,
2000–2004
Member, College of Arts and Sciences Sponsored Research Advisory Group, University at Buffalo,
2003–2004
Member, Faculty Senate, Florida State University 2005–present
Chair, Animal Care and Use Committee, Florida State University, 2008--

MAJOR DEPARTMENT SERVICE (since 1986):

Director, Behavioral Neuroscience Program, University at Buffalo, 1986–1998, 2000–2004

Member, Planning and Policy Committee, University at Buffalo, 1986–1994, 2000–2004
Chair, Policy Committee, University at Buffalo, 1986–1987, 1990–1991
Chair, Personnel Committee, University at Buffalo, 1999–2000, 2003–2004
Member, Personnel Committee, University at Buffalo, 2002–2003
Member, Library Committee, Florida State University, 2004–2006
Member, Technology Committee, Florida State University, 2004–2006
Member, Faculty Development Committee, Florida State University, 2006–2007
Member, Graduate Studies Committee, Florida State University, 2006–2007

MEMBERSHIPS:

Foundation for the Advancement of Behavioral and Brain Sciences, Secretary, January 2007–present
Phi Beta Kappa, Alpha Chapter, FSU, Vice President, September 2006, President 2007–present
Society for Behavioral Neuroendocrinology, Elected Secretary: July 1, 2003 to June 30, 2005.
American Psychological Association, Program Chair of Div. 6, Behavioral Neuroscience and Comparative Psychology, 1999–2000; Fellow of Div. 6, 2000–present
American Psychological Society, Program Committee, in charge of Behavioral Neuroscience program, 2002 to 2004; Fellow, 2003–present
Society for Neuroscience
International Academy for Sex Research, member of Program Committee, 1999–2000
International Society for Psychoneuroendocrinology
New York Academy of Sciences
American Association for the Advancement of Science

PUBLICATIONS:

Articles in Refereed Journals:

- Muschamp, J.W., & Hull, E.M. : (2007) Melanin concentrating hormone and estrogen receptor- α are coextensive but not coexpressed in cells of male rat hypothalamus, *Neuroscience Letters*, 427:123–126.
- Hull, R.T. & Hull, E.M., A Step toward Resolving the Abortion and Embryonic Stem Cell Debates: A Scientific and Philosophical Update, CSER Review, 1:2 (Winter/Spring 2006/07), pp. 16–17; from a talk presented at a conference on Science and Ethics in Toronto, Ontario, Canada, in 2004, and reprinted in *Science and Ethics: Can Science Help Us Make Wise Moral Judgments?* eds. Paul Kurtz and David Koepsel (Amherst, NY: Prometheus Books, 2007).
- Muschamp, J.W., Dominguez, J.M., Sato, S.M., Shen, R-Y, Hull, E.M. (2007) A Role for Hypocretin (Orexin) in Male Sexual Behavior, *The Journal of Neuroscience*, 27: 2837–2845.
- Hull, E.M. & Dominguez, J.M. (2007) Hormonal control of male sexual behavior in rodents. Invited review for a special issue of *Hormones and Behavior* on Reproductive Behavior in Farm and Laboratory Animals, edited by Gabriella Gonzalez-Mariscal and Charles Rosseli, 52(1): 45–55.
- Sato, S.M., Wersinger, S.R., & Hull, E.M. (2007) The effects of nitric oxide-cGMP pathway stimulation on dopamine in the medial preoptic area and copulation in DHT-treated castrated male rats. *Hormones and Behavior*, 52(2): 177–182.
- Dominguez, J.M., Brann, J.H., Gil, M., & Hull, E.M. (2006) Sexual experience increases nitric oxide synthase in the medial preoptic area of male rats. *Behavioral Neuroscience*, 120: 1389–1394.
- Hull, E.M. & Dominguez, J.M. (2006) Getting his act together: Roles of glutamate, nitric oxide, and dopamine in the medial preoptic area. Invited review for a special issue of *Brain Research* on Sex, Genes, and Steroids, edited by Jill Becker, 1126: 66–75.
- Dominguez, J. M., Gil, M., & Hull, E.M. (2006) Preoptic glutamate facilitates male sexual behavior. *The Journal of Neuroscience*, 26: 1699–1703.
- Sato, S. & Hull, E.M. (2006) The nitric oxide-cGMP pathway regulates dopamine efflux in the medial preoptic area and copulation in male rats, *Neuroscience*, 139: 417–428.

- Dominguez, J.M. & Hull, E.M. (2005) Dopamine, the medial preoptic area, and male sexual behavior. *Physiology & Behavior*, 86: 356–368.
- Sato, S., Braham, C.S., Putnam, S.K., & Hull, E.M. (2005) Neuronal nitric oxide synthase (nNOS) and gonadal steroids in the MPOA of male rats: Co-localization of nNOS with steroid receptors and testosterone-induced restoration of copulation and nNOS-immunoreactivity. *Brain Research*, 1043: 205–213.
- Putnam, S.K., Sato, S., & Hull, E.M. (2005) Hormonal maintenance of copulation in castrates: Association with intracellular dopamine and with nitric oxide synthase in MPOA. *Hormones and Behavior*, 47: 513–522.
- Hull, E.M. Muschamp, J. W., & Sato, S. (2004) Dopamine and serotonin: Influences on male sexual behavior. In special issue of *Physiology & Behavior* on Male Sexual Behavior, Lique Coolen and E.M. Hull, Co-Editors, 83:291–308.
- Lagoda, G., Vigdorichik, A., Muschamp, J.W., & Hull, E.M. (2004) A nitric oxide synthase inhibitor in the MPOA inhibits copulation and stimulus sensitization in male rats. *Behavioral Neuroscience*, 118:1317–1323.
- Muschamp, J.W., Regina, M. J., Hull, E.M., Winter, J.C., & Rabin, R.A. (2004) Lysergic acid diethylamide (LSD) and [-]-2,5-dimethoxy-4-methylamphetamine (DOM) increase extracellular glutamate in rat prefrontal cortex. *Brain Research*, 1023:134–140.
- Dominguez, J.M, Muschamp, J.W., Schmich, J.M., & Hull, E.M. (2004) Nitric oxide mediates glutamate-evoked dopamine release in the medial preoptic area. *Neuroscience*, 125:203–210.
- Meston, C.M., Hull, E.M., Levin, R.J., and Sipski, M. (2004) Disorders of orgasm in women. *Journal of Sexual Medicine*. 1: 66–68.
- Putnam, S.K., Sato, S., & Hull, E.M. (2003) Hormonal maintenance of copulation in castrates: Association with extracellular dopamine in MPOA. *Hormones and Behavior*, 44:419–426.
- Lonstein, J.S., Dominguez, J.M., Putnam, S.K., DeVries, G.J., & Hull, E.M. (2003) Intracellular preoptic area dopamine and serotonin during pregnancy and lactation in rats: Possible role in maternal behavior. *Brain Research*, 970:149–158.
- Dominguez, J.M., & Hull, E.M. (2003) The medial amygdala regulates mating-induced dopamine release in the medial preoptic area. *Annals, New York Academy of Sciences*, 985:515–518.
- Powell, W., Dominguez, J.M., & Hull, E.M. (2003) An NMDA antagonist blocks the experience-induced enhancement of male sexual behavior. *Behavioral Neuroscience*, 117:69–75.
- Dominguez, J.M. & Hull, E.M. (2001) Stimulation of the medial amygdala enhances medial preoptic dopamine release: Implications for male rat sexual behavior. *Brain Research*, 917:225–229.
- Putnam, S.K., Du, J., & Hull, E.M. (2001) Testosterone restoration of copulation and medial preoptic dopamine release in castrated male rats: 2-, 5-, and 10-day treatments. *Hormones and Behavior*, 39: 216–224.
- Dominguez, J., Riolo, J.V., Xu, Z. & Hull, E.M. (2001) Regulation by the medial amygdala of copulation and medial preoptic dopamine release. *Journal of Neuroscience*, 21:349–355.
- Matuszewich, L., Lorrain, D. S., & Hull, E.M. (2000) Dopamine alterations in the medial preoptic area of female rats in response to hormonal manipulation and sexual activity. *Behavioral Neuroscience*, 114:772–782.
- Lorrain, D.S., Matuszewich, L., Riolo, J. V., & Hull, E.M. (1999) Lateral hypothalamic serotonin inhibits nucleus accumbens dopamine: Implications for sexual satiety. *Journal of Neuroscience*, 19:7648–7652.
- Du, J. & Hull, E.M. (1999) Effects of testosterone on neuronal nitric oxide synthase and tyrosine hydroxylase. *Brain Research*, 836:90–98.
- Hull, E.M., Lorrain, D. S., Du, J., Matuszewich, L., Lumley, L. A., Putnam, S. K., & Moses, J. (1999) Hormone-Neurotransmitter interactions in the control of sexual behavior. *Behavioral Brain Research*, Special issue on Neurobiology of Sexual Behavior, 105:105–116.
- Lumley, L.A. & Hull, E.M. (1999) Effects of a D1 antagonist and of sexual experience on copulation-induced FOS-like immunoreactivity in the medial preoptic nucleus. *Brain Research*, 829:55–68.
- Moses, J., & Hull, E.M. (1999) A nitric oxide synthesis inhibitor administered into the medial preoptic area increases seminal emissions in an ex copula reflex test. *Pharmacology Biochemistry and Behavior*, 63:345–348.
- Matuszewich, L., Lorrain, D. S., Trujillo, R., Dominguez, J., Putnam, S. K., & Hull, E.M. (1999) Partial antagonism of 8-OH-DPAT's effects on male rat sexual behavior with a D₂, but not a 5-HT_{1A}, antagonist. *Brain Research*, 820: 55–62.

- Lorrain, D. S., Matuszewich, L., & Hull, E.M. (1998) 8-OH-DPAT influences extracellular levels of serotonin and dopamine in the medial preoptic area of male rats. *Brain Research*, 790: 217–223.
- Du, J., Lorrain, D. S., & Hull, E.M. (1998) Castration decreases extracellular, but increases intracellular, dopamine in medial preoptic area of male rats. *Brain Research*, 782: 11–17.
- Lorrain, D. S., Matuszewich, L., Friedman, R., & Hull, E.M. (1997). Extracellular serotonin in the lateral hypothalamic area is increased during the postejaculatory interval and impairs copulation in male rats. *Journal of Neuroscience*, 17: 9361–9366.
- Hull, E.M., Du, J., Lorrain, D. S., Matuszewich, L. (1997). Testosterone, preoptic dopamine, and copulation in male rats. *Brain Research Bulletin*, 44:327–333.
- Lorrain, D.S., Matuszewich, L., Howard, R.V., Du, J., & Hull, E.M. (1996) Nitric oxide promotes medial preoptic dopamine release during male rat copulation. *NeuroReport*, 8:31–34.
- Hull, E.M., Du, J., Lorrain, D.S., & Matuszewich, L. (1995) Extracellular dopamine in the medial preoptic area: Implications for sexual motivation and hormonal control of copulation. *Journal of Neuroscience*, 15:7465–7471.
- Markowski, V.P., & Hull, E.M. (1995) Cholecystokinin modulates mesolimbic dopaminergic influences on male rat copulatory behavior. *Brain Research*, 699:266–274.
- Matuszewich, L., Loucks, J.A., Moses, J., Lorrain, D.S., & Hull, E.M. (1995) Effects of morphiceptin in the medial preoptic area on male sexual behavior. *Psychopharmacology*, 122:330–335.
- Moses, J., Loucks, J.A., Watson, H.L., Matuszewich, L., & Hull, E.M. (1995). Dopaminergic drugs in the medial preoptic area and nucleus accumbens: Effects on motor activity, sexual motivation and sexual performance. *Pharmacology, Biochemistry & Behavior*, 51:681–686.
- Hull, E.M., Matuszewich, L., Lumley, L.A., Dominguez, J., Moses, J., & Lorrain, D.S. (1994) The roles of nitric oxide in sexual function of male rats. *Neuropharmacology*, 33:1499–1504.
- Markowski, V. P., Eaton, R. C., Lumley, L. A., Moses, J., & Hull, E.M. (1994) Stimulation of D₁ receptors in the medial preoptic area facilitates copulation of male rats. *Pharmacology, Biochemistry & Behavior*, 47:483–486.
- Lorrain, D. S., & Hull, E.M. (1993) Nitric oxide increases dopamine and serotonin release in the medial preoptic area. *NeuroReport*, 5:87–89.
- Hull, E.M., Eaton, R. C., Moses, J., & Lorrain, D. (1993) Copulation increases dopamine activity in the medial preoptic area of male rats. *Life Sciences*, 52:935–940.
- Hull, E.M., Eaton, R. C., Markowski, V. P., Moses, J., Lumley, L. A., & Loucks, J. A. (1992) Opposite influence of medial preoptic D₁ and D₂ receptors on genital reflexes: Implications for copulation. *Life Sciences*, 51:1705–1713.
- Bazzett, T. J., Bitran, D., Lumley, L. A., & Hull, E.M. (1992) Male rat copulation following 6-OHDA lesions of the medial preoptic area: Resistance to repeated administration and rapid behavioral recovery. *Brain Research*, 580:164–171.
- Hull, E.M., Weber, M. S., Eaton, R. C., Dua, R., Markowski, V. P., Lumley, L., & Moses, J. (1991). Dopamine receptors in the ventral tegmental area affect motor, but not motivational or reflexive, components of copulation in male rats. *Brain Research*, 554:72–76.
- Bazzett, T. J., Eaton, R. C., Thompson, J. T., Markowski, V. P., Lumley, L. A., & Hull, E.M. (1991). Dose dependent D₂ effects on genital reflexes after MPOA injections of quinlorane and apomorphine. *Life Sciences*, 48:2309–2315.
- Warner, R. K., Thompson, J. T., Markowski, V. P., Loucks, J. A., Bazzett, T. J., Eaton, R. C., & Hull, E.M. (1991). Microinjection of the dopamine antagonist cis-flupenthixol into the MPOA impairs copulation, penile reflexes and sexual motivation in male rats. *Brain Research*, 540:177–182.
- Eaton, R. C., Markowski, V. P., Lumley, L. A., Thompson, J. T., Moses, J., & Hull, E.M. (1991). D₂ receptors in the paraventricular nucleus regulate copulation and genital responses in male rats. *Pharmacology, Biochemistry & Behavior*, 39:177–181.
- Scaletta L. L., & Hull, E.M. (1990). Systemic or intracranial apomorphine increases copulation in long-term castrated male rats. *Pharmacology, Biochemistry & Behavior*, 37:471–475.

- Hull, E.M., Bazzett, T. J., Warner, R. K., Eaton, R. C., & Thompson, J. T. (1990). Dopamine receptors in the ventral tegmental area modulate male sexual behavior in rats. *Brain Research*, 512:1-6.
- Band, L. C., & Hull, E.M. (1990). Morphine and dynorphin (1-13) microinjected into the medial preoptic area and nucleus accumbens: Effects on sexual behavior in male rats. *Brain Research*, 524:77-84.
- Hull, E.M., Warner, R. K., Bazzett, T. J., Eaton, R. C., Thompson, J. T., & Scaletta, L. L. (1989). D₂/D₁ ratio in the medial preoptic area affects copulation of male rats. *Journal of Pharmacology and Experimental Therapeutics*, 251:422-427.
- Pehek, E. A., Thompson, J. T., & Hull, E.M. (1989). The effects of intracranial administration of the dopamine agonist apomorphine on penile reflexes and seminal emission in the rat. *Brain Research*, 500:325-332.
- Pehek, E. A., Thompson, J. T., & Hull, E.M. (1989). The effects of intrathecal administration of the dopamine agonist apomorphine on penile reflexes and copulation in the male rat. *Psychopharmacology*, 99:304-308.
- Bitran, D., Thompson, J. T., Hull, E.M., & Sachs, B. D. (1989). Quinelorane (LY163502), A D₂ dopamine receptor agonist, facilitates seminal emission but inhibits penile erection in the rat. *Pharmacology, Biochemistry & Behavior*, 34:221-226.
- Pehek, E. A., Thompson, J. T., Eaton, R. C., & Hull, E.M. (1988). Apomorphine and haloperidol, but not domperidone, affect penile responses in rats. *Pharmacology, Biochemistry & Behavior*, 31:201-208.
- Hull, E.M., Pehek, E. A., Bitran, D., Warner, R. K., Holmes, G.M., Band, L. C., Bazzett, T., & Clemens, L. G. (1988). Cholinergic regulation of male sexual behavior in rats: Effects of an intracerebrally microinjected antagonist. *Pharmacology, Biochemistry & Behavior*, 31:175-178.
- Hull, E.M., Bitran, D., Pehek, E. A., Holmes, G. M., Warner, R.K., Band, L. C., & Clemens, L. G. (1988). Cholinergic regulation of male sexual behavior in rats: Effects of an intra-cerebrally microinjected agonists. *Pharmacology, Biochemistry & Behavior*, 31:169-174.
- Pehek, E. A., Warner, R. K., Bazzett, T., Bitran, D., Band, L.C., Eaton, R. C., & Hull, E.M. (1988). Microinjection of cis-flupenthixol, a dopamine antagonist into the medial preoptic area impairs sexual behavior of male rats. *Brain Research*, 443:70-76.
- Bitran, D., Hull, E.M., Holmes, G. M., & Lookingland, K. J. (1988). Regulation of male rat copulatory behavior by incertohypothalamic dopamine neurons, *Brain Research Bulletin*, 20:323-331.
- Bitran, D., & Hull, E.M. (1987). Pharmacological analysis of male rat sexual behavior. *Neuroscience and Biobehavioral Reviews*, 11:365-389.
- Hanulak, A. T., & Hull, E.M. (1987). Behavioral deficits in a rat model of maternal PKU. *Psychobiology*, 15:75-78.
- Hull, E.M., Bitran, D., Pehek, E. A., Warner, R. K., Band, L. C., Holmes, G. M. (1986). Dopaminergic control of male sex behavior in rats: Effects of an intracerebrally infused agonist. *Brain Research*, 370:73-81.
- Hull, E.M., Nishita, J. K., Bitran, D., & Dalterio, S. (1984). Perinatal dopamine-related drugs demasculinize rats. *Science*, 224:1011-1013.
- Hull, E.M., Young, S. H., & Ziegler, M. G. (1984) Aerobic fitness affects cardiovascular and catecholamine responses to stressors. *Psychophysiology*, 21:353-360.
- Hull, E.M. (1981) Effects of neonatally administered progesterone on sexual behavior of male and female rats. *Physiology and Behavior*, 26:401-405.
- Hull, E.M., Franz, J. R., Snyder, A. M., & Nishita, J. K. (1980) Perinatal progesterone treatment and learning, social and reproductive behavior in rats. *Physiological Behavior*, 24:251-256.
- Wang, L., & Hull, E.M. (1980) Tail pinch facilitates sexual behavior in olfactory bulbectomized male rats. *Physiology and Behavior*, 24:211-215.
- Snyder, A. M., & Hull, E.M. (1980) Perinatal progesterone: Effects on infant and adult active avoidance. *Psychoneuroendocrinology*, 5:113-119.
- Kleese, D. A., & Hull, E.M. (1980) Ultrasonic vocalization in neonatal gerbils (*Meriones unguiculatus*): A possible mechanism underlying synchrony of behavioral interactions between parents and young. *Developmental Psychobiology*, 13:233-241.
- Hull, E.M., L'Hommedieu, G., Kastaniotis, C., & Franz, J. R. (1979) Olfactory bulbectomy, pituitary-adrenal hormones and behavior. *Physiology and Behavior*, 22:417-421.

- Snyder, A. M., Hull, E.M., & Roth, J. A. (1979) The effect of maternal progesterone injections on fetal development of brain monoamine oxidase of rats. *Brain Research*, 170:184–197.
- Franz, J. R., Hull, E.M., Snyder, A. M., & Roth, J. A. (1978) The effect of maternal progesterone on brain monoamine oxidase activity of neonatal rats. *Brain Research*, 158:397–406.
- Hull, E.M., Kastaniotis, C., L'Hommedieu, G., & Franz, J. R. (1976) Environmental enrichment and crowding: Behavioral and hormonal effects in gerbils. *Physiology and Behavior*, 5:735–742.
- Berg, R., Shanin, R., & Hull, E.M. (1975) Early isolation in the gerbil (*Meriones unguiculatus*): Behavioral and physiological effects. *Physiological Psychology*, 3:35–38.
- Hull, E.M., & Homan, H. D. (1975) Olfactory bulbectomy, peripheral anosmia, and muricide by rats. *Behavioral Biology*, 14:481–488.
- Hull, E.M., Hamilton, K., Engwall, D., & Rosselli, L. (1974) Effects of olfactory bulbectomy and peripheral deafferentation on reactions to crowding in gerbils (*Meriones unguiculatus*). *Journal of Comparative and Physiological Psychology*, 86:247–254.
- Hull, E.M., Chapin, E., & Kastaniotis, C. (1974) Effects of crowding and intermittent isolation on gerbils (*Meriones unguiculatus*). *Physiology and Behavior*, 13:723–727.
- DeValois, R. L., Morgan, H. C., Polson, M. C., Mead, W. R., & Hull, E.M. (1974) Psychophysical studies of monkey vision I. Macaque luminosity and color vision tests. *Vision Research*, 14:53–68.
- Hull, E.M., Langan, C. J., & Roselli, L. (1973) Population density and social, territorial, and physiological measures in gerbils. *Journal of Comparative and Physiological Psychology*, 84:414–422.
- Hull, E.M., Rosselli, L., & Langan, C. J. 1973. Effects of isolation and grouping on guinea pigs. *Behavioral Biology*, 9:493–497.
- Spector, S. A., & Hull, E.M. (1972) Anosmia and muricide by rats: A non-olfactory role for the olfactory bulbs. *Journal of Comparative and Physiological Psychology*, 80:354–356.
- Hull, E.M. (1968) Corticofugal influence in the Macaque lateral geniculate nucleus. *Vision Research*, 8:1285–1298.

Chapters in books:

- Hull, R.T., and Hull, E.M. (2007) A Step toward Resolving the Abortion and Embryonic Stem Cell Debates: A Scientific and Philosophical Update. In *Science and Ethics: Can Science Help Us Make Wise Moral Judgments?* eds. Paul Kurtz and David Koepsel (Amherst, NY: Prometheus Books, 2007).
- Hull, E.M., Dominguez, J.M., & Muschamp, J.M. (2007) The neurochemistry of male sexual behavior. In *Behavioral Neuroendocrinology, Neurochemistry, and Molecular Neurobiology*, Jeffrey Blaustein, editor, one of a 24-volume series in *Handbook of Neurochemistry and Molecular Neurobiology*, Abel Lajtha, Editor-in-Chief. Springer Verlag, pp. 37–94.
- Hull, E.M., Wood, R.I., & McKenna, K. E. (2006) The neurobiology of male sexual behavior. In: *The Physiology of Reproduction*, 3rd Edition J. Neill, Editor in Chief, Donald Pfaff, Section Editor, Elsevier Press, pp. 1729–1824.
- Meston, C. M., Levin, R., Sipski, M. L., Hull, E.M., & Heiman, J. R. (2005). Women's Orgasm. In: J. R. Heiman, C. M. Davis, & S. L. Davis (Eds.), *Annual review of sex research: An integrative and interdisciplinary review*. Mason City, IA: The Society for the Scientific Study of Sexuality, (pp. 173–257).
- Meston, C.M., Hull, E.M., Levin, R.J., Sipski, M.L. (2004) Women's orgasm. In: *Sexual Medicine: Sexual Dysfunctions in Men and Women*. T. F. Lue, R. Basson, R. Rosen, F. Giuliano, S. Khoury, F. Montorsi, Eds. Health Publications, Paris, France. pp. 783–850.
- Hull, E.M. & Dominguez, J.M. (2003) Sex Behavior. In: *Comprehensive Handbook of Psychology*, Vol. 3, *Biological Psychology*, R. J. Nelson and M. Gallagher, Eds. Wiley & Sons, pp. 321–353.
- Hull, E.M., Meisel, R.L., & Sachs, B.D. (2002) Male sexual behavior. In: *Hormones, Brain and Behavior*, (a 5 vol. set) D.W. Pfaff, A.P. Arnold, A.M. Etgen, S.E. Fahrbach, & R.T. Rubin, Eds. Academic Press, pp. 3–137.
- Hull, E.M. (2001) The Nigrostriatal and Mesolimbic Dopamine Systems. In: *Basic Concepts in Neuroscience*, Malcolm Slaughter, Ed., McGraw-Hill, pp. 187–208.

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Book:

B Edition, 1987; Fourth Edition, 1991; Fifth Edition, 1995; Sixth Edition, 1997. Seventh Edition, 2000; Eighth Edition, 2003; Ninth Edition, 2006.

Invited book reviews:

- Hull, E.M. (2002) Review of *The Barmaid's Brain and Other Strange Tales of Science*. In *Pharmaceutical News*, 8:57–58.
- Hull, E.M. (1995) Review of *Psychopharmacology: The Fourth Generation of Progress*. F. E. Bloom & D. J. Kupfer, Eds. In *Pharmaceutical News*, 7:40–41.
- Hull, E.M. (1983) Motivational constructs: Warm blanket or patchwork quilt? Invited review of D. W. Pfaff, *The Physiological Mechanisms of Motivation*. *Contemporary Psychology*, 28:586–587.

Manuscripts in preparation:

- Hull, E.M. *Neurophysiology of Male Sexual Behavior* (commissioned book in preparation). Oxford University Press.
- Muschamp, J.W. & Hull, E.M. *Neuropeptides and Male Sexual Behavior* (commissioned article in preparation). In *Nature Reviews Neuroscience*.
- Hull, E.M. & Rodriguez-Manzo, G. (chapter in preparation) *Male Sexual Behavior*. In *Hormones, Brain and Behavior*, Second Edition, Anne Etgen, Editor, Elsevier Press.
- Parrish, B., Vigdorichik, A., Dominguez, J. M., & Hull, E.M. An NMDA inhibitor in the MPOA inhibits copulation and stimulus sensitization in male rats.

ADDRESSES TO INTERNATIONAL CONFERENCES:

- Hull, E.M. (2007) Dopamine in Male Sexual Behavior. Invited talk at the Gordon Conference on Catecholamines, Magdalen College, Oxford University, Oxford, England.
- Hull, E.M. (2006) Control of Ejaculation: What the Rat's Brain Tells the Clinician. Invited talk at the *10th Annual Meeting of Society for Behavioral Neuroendocrinology*, Pittsburgh, PA.
- Meston, C.M., Hull, E.M., Levin, R.J., Sipski, M.L. (2003) Female orgasm. *2nd International Consultation on Erectile and Sexual Dysfunctions*, Sponsored by the World Health Organization, Paris, France.
- Hull, E.M. (2002) Sex and the Single Rat: Tales of dopamine and serotonin. Talk given as part of a symposium, *Neuroendocrinology of Motivation and Reward*, Chaired by L. Coolen & E.M. Hull, *6th Annual Meeting of Society for Behavioral Neuroendocrinology*, Amherst, MA.
- Hull, E.M. (2001) All you ever wanted to know about male rat sexual behavior. Invited address, *American Psychological Society*, Montreal, Canada.

- Hull, E.M., Putnam, S. K. Du, J. (2001) Hormonal control of copulation and preoptic dopamine in male rats. E.M. Hull, Co-Chair, Symposium: Hormones and Brain Functions. *International Society of Psychoneuroendocrinology Regional Meeting*, St. Petersburg, Russia.
- Hull, E.M., Du, J., Lorrain, D. S., Matuszewich, L., & Putnam, S. K. (2000) Dopamine facilitates and serotonin inhibits male rat sexual behavior. Part of symposium: Brain mechanisms that facilitate or inhibit sexual behavior, E.M. Hull, Chair, *International Academy of Sex Research*, Paris, France.
- Hull, E.M., Du, J., Lorrain, D. S., Matuszewich, L., & Putnam, S. K. (2000) Dopamine facilitates and serotonin inhibits male rat sexual behavior. Invited address to *5th Congress of the European Federation of Sexology*, Berlin, Germany.
- Hull, E.M., Du, J., Lorrain, D. S., Matuszewich, L., & Putnam, S. K. (1999) Dopamine facilitates and serotonin inhibits male rat sexual behavior. Invited address to the *25th Congress of the Turkish Physiological Society*, Elazig, Turkey.
- Hendry, B., Althof, S., Benson, G.S., Haensel, S.M., Hull, E.M., Kihara, K. & Opsomer, R.J. (1999) Male orgasmic and ejaculatory disorders. Invited contribution to the *First International Consultation on Erectile Dysfunction*, sponsored by the World Health Organization (WHO), Paris, France.
- Hull, E.M. (1999) Dopamine and serotonin influence sexual motivation and copulation in male rats. Invited presentation at an NIMH Workshop: *Revisiting the Concept of the Central Motive State: New Perspectives in Affective Neuroscience*. Washington, DC.
- Hull, E.M. (1997) Dopaminergic regulation of penile erection and copulation. Invited address, *Conference on Neurological Aspects of Masculine Sexual Behavior*, Paris, France.
- Hull, E.M. (1997) Inhibitory neural mechanisms in the control of sexual behavior. Invited address, *23rd Annual Meeting of International Academy of Sex Research*, Baton Rouge, Louisiana.
- Hull, E.M. (1996) Testosterone, preoptic dopamine, and copulation in male rats. Invited address, *5th International Conference on Hormones, Brain and Behavior*, Torino, Italy.
- Hull, E.M. (1996) Testosterone and nitric oxide affect dopamine release during sociosexual interactions. Invited address, *7th International Conference on in vivo Methods*, Santa Cruz de Tenerife, Spain (Canary Islands).
- Hull, E.M. (1996) Symposium organizer: Sex and Gluttony: Brain Control of Motivated Behaviors. Paper in symposium: Hull, E.M., Lorrain, D. S., Du, J., Matuszewich, L., Contributions of medial preoptic and mesolimbic dopamine in male sexual behavior. *European Winter Conference on Brain Research*, Serre-Chevalier, France.
- Hull, E.M. (1995) Behavioral markers of neuroendocrine development. Invited address, *13th International Neurotoxicology Conference*, Hot Springs, Arkansas.
- Hull, E.M., Nishita, J., Bitran, D., Lorrain, D., Matuszewich, L., & Du, J. (1995) Brain dopamine in the organization and activation of male sexual behavior. Invited address, *International Behavioral Development Symposium*, Minot, North Dakota.
- Hull, E.M., Du, J., Lorrain, D. S., & Matuszewich, L. (1995). Testosterone promotes dopamine release in medial preoptic area of male rats in response to a female. *15th European Winter Conference on Brain Research*. L'Alpe d'Huez, France.
- Hull, E.M. (1994). Testosterone regulates dopamine release in the MPOA of male rats. *International Society for Psychoneuroendocrinology*, Seattle, WA.
- Hull, E.M. (1994). Effects of systemic inhibition of NO synthase on male rat sexual behavior. *International Conference on Nitric Oxide in the Nervous System*, Montreal, Quebec, Canada.
- Hull, E.M. (1992). Inhibition of nitric oxide synthesis impairs copulation and genital reflexes of male rats. *International Society for Psychoneuroendocrinology*, Madison WI.
- Hull, E.M. (1991). Hormone-transmitter interactions in the control of behavior. Invited address, *Institute for Experimental Medicine of the USSR Academy of Medicine and Science*, St. Petersburg, Russia.
- Hull, E.M. (1991). Dopamine agonists in the MPOA increase mounting by castrated male rats and regulate genital reflexes in intact males. Invited address, *Congress of the International Society of Psychoneuroendocrinology*, Siena, Italy.

- Hull, E.M. (1990). Dopamine receptors in the medial preoptic area influence copulation and genital reflexes in male rats. *International Society for Psychoneuroendocrinology*, Buffalo NY.
- Hull, E.M., Bitran, D., Pehek, E., Band, L, Warner, R., Bazzett, T., Eaton, R., & Thompson, J. (1989). Brain dopamine regulation of male sexual behavior in rats. Invited address: *International Academy of Sex Research*, Princeton, N.J.
- Hull, E.M. (1989). Pharmacology of male rat sexual behavior: Ethological considerations. Invited address: *Twenty-first International Ethological Conference*, Utrecht, The Netherlands.
- Hull, E.M. (1989). Brain dopamine regulation of male rat sexual behavior. Invited plenary lecture, *World Congress of Sexology*, Caracas, Venezuela.
- Hull, E.M., Warner, R., Bazzett, T., Eaton, R., Pehek, E., = Bitran, D., (1988). D₂, but not D₁, receptors in the MPOA decrease ejaculatory threshold in male rats. *XVIth Congress of the Collegium Internationale Neuro-Psychopharmacologicum*, Munich, Federal Republic of Germany.
- Hull, E.M., Bitran, D., Pehek, E., Warner, R., & Band, L. C. (1984). Intracerebral dopaminergic and cholinergic regulation of male rat sex behavior. *First Congress of Comparative Physiology and Biochemistry, Section of International Union of Biological Sciences*, Liege, Belgium.
- Hull, E.M., Nishita, J., & Bitran, D. (1982). A role for dopamine in sex differentiation of the brain. *XIII International Congress of the International Society of Psychoneuroendocrinology*, Tubingen, Federal Republic of Germany.

PUBLISHED ABSTRACTS (1992–present):

- Gil, M., Grausam, K.B., & Hull, E.M. Oxytocin in the medial preoptic area facilitates sexual behavior in male rats. *37th Annual Meeting of Society for Neuroscience*, San Diego, CA.
- Muschamp, J.W, & Hull, E.M. (2007) Increased Fos-immunoreactivity in hypocretin (orexin)-apposed ventral tegmental area dopamine neurons during male rat sexual behavior. *37th Annual Meeting of Society for Neuroscience*, San Diego, CA.
- Dominguez, J. M. & Hull, E.M. (2006) Serotonin attenuates mating-induced glutamate activity in the medial preoptic area: Implications for impaired libido resulting from SSRIs. *36th Annual Meeting of Society for Neuroscience*, Atlanta, GA.
- Muschamp, J. W., Shen, R. Y., & Hull, E.M. (2006) Effect of hypocretin (orexin) on ventral tegmental area dopamine neurons in vivo. *36th Annual Meeting of Society for Neuroscience*, Atlanta, GA.
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- Dominguez, J. M., Gil, M., Hull, E.M. (2006) Mating-induced glutamate release in the medial preoptic area of male rats: Regulation of ejaculation and refractory period. *10th Annual Meeting of Society for Behavioral Neuroendocrinology*, Pittsburgh, PA.
- Muschamp, J. W., Sato, S., Dominguez, J.M., Hull, E.M. (2006) Gonadal regulation of hypocretin/orexin immunoreactivity in male rats. *10th Annual Meeting of Society for Behavioral Neuroendocrinology*, Pittsburgh, PA.
- Gil, M., Olivera, A., & Hull, E.M. (2006) Oxytocin antagonist in the medial preoptic area reduces anogenital investigation and copulatory efficiency in the male rat, *10th Annual Meeting of Society for Behavioral Neuroendocrinology*, Pittsburgh, PA.
- J. M. Dominguez, M. Gil, A. F. Hood, & E.M. Hull (2005) Mating-induced glutamate release in the medial preoptic area of male rats: Regulation of ejaculation and refractory period. *35thrd Annual Meeting of Society for Neuroscience*, Washington, DC.
- S. Sato, S. W. Wersinger, & E.M. Hull (2005) Effects of NO donor and cGMP analog in the MPOA of DHT-treated castrates. *35thrd Annual Meeting of Society for Neuroscience*, Washington, DC.
- J. W. Muschamp, S. Sato, & E.M. Hull, Castration decreases hypocretin/orexin immunoreactivity in hypothalamus of male rats. *35thrd Annual Meeting of Society for Neuroscience*, Washington, DC.

- M. Gil, D. J. Smith, A. F. Hood, J. M. Dominguez, & E.M. Hull, (2005) cAMP-dependent protein kinase inhibition in the medial preoptic area impairs copulatory behaviors in male rats. *35thrd Annual Meeting of Society for Neuroscience*, Washington, DC.
- J. M. Dominguez, M. Gil, A. F. Hood, & E.M. Hull. (2005) Sexual experience increases nitric oxide synthase in the medial preoptic area of male rats. *9th Annual Meeting of Society for Behavioral Neuroendocrinology*, Austin, TX.
- M. Gil, J. M. Dominguez, & E. M. Hull. (2005) cAMP-dependent protein kinase inhibition in the medial preoptic area impairs copulatory behaviors in male rats. *9th Annual Meeting of Society for Behavioral Neuroendocrinology*, Austin, TX.
- S. Sato, S. R. Wersinger, & E.M. Hull. (2005) Effects of NO donor and cGMP analog in the MPOA of DHT-treated castrates. *9th Annual Meeting of Society for Behavioral Neuroendocrinology*, Austin, TX.
- J. M. Dominguez, M. Gil, & E.M. Hull. (2004) Colocalization of nitric oxide synthase with NMDA receptors in the MPOA: Implications for male sexual behavior. *34thrd Annual Meeting of Society for Neuroscience*, San Diego, CA. 414.14.
- S. Sato & E.M. Hull. (2004) Effects of a cGMP analog on MPOA dopamine levels and copulation in male rats. *34thrd Annual Meeting of Society for Neuroscience*, San Diego, CA. 423.12.
- J. W. Muschamp, G. Lagoda, & E.M. Hull (2004) Sexual stimuli increase Fos immunoreactivity in hypocretin/orexon neurons of male rats. *34thrd Annual Meeting of Society for Neuroscience*, San Diego, CA. 888.20.
- D.J. Smith, M. Gil, & E.M. Hull. (2004) Raclopride, but not MPPI, in the anterior lateral hypothalamus blocks the facilitative effects of 8-OH-DPAT on sexually satiated male rats. *34thrd Annual Meeting of Society for Neuroscience*, San Diego, CA. 414.12.
- M. Gil, D. J. Smith, J. M. Dominguez, & E.M. Hull. (2004) The effects of cAMP-dependent protein kinase inhibition in the medial preoptic area on copulatory behaviors in sexually naïve male rats. *34thrd Annual Meeting of Society for Neuroscience*, San Diego, CA. 214.12.
- J. W. Muschamp & E.M. Hull (2004) Increased Fos expression in hypocretin/orexin neurons following male rat sexual behavior. *8th Annual Meeting of Society for Behavioral Neuroendocrinology*, Lisbon, Portugal. *Hormones & Behavior*, 46:96.
- D.J. Smith, C.D. Cedenno, A.A. Loewke, S. Sato, & E.M. Hull, (2003) 8-OH-DPAT in the anterior lateral hypothalamus reverses sexual satiety in male rats. *33rd Annual Meeting of Society for Neuroscience*, New Orleans, LA.
- G. Lagoda, A. Vigdorichik, B. Bishop & E.M. Hull, 2003, A NOS inhibitor, microinjected into the MPOA, inhibits copulation in naive and sexually experienced male rats. *33rd Annual Meeting of Society for Neuroscience*, New Orleans, LA.
- A. Vigdorichik, G. Lagoda, K.M.K Boje, & E.M. Hull, 2003, A glutamate NMDA receptor antagonist, microinjected into the MPOA, impairs male sexual behavior. *33rd Annual Meeting of Society for Neuroscience*, New Orleans, LA.
- S. Sato, C.D. Cedenno, Z. Xu, & E.M. Hull, 2003, Effects of cGMP manipulation on MPOA dopamine levels and copulation in male rats. *33rd Annual Meeting of Society for Neuroscience*, New Orleans, LA.
- Z. Xu & E.M. Hull, 2003, Tonic inhibition by the MPOA of the mesoaccumbens dopamine tract before and during male sexual behavior. *33rd Annual Meeting of Society for Neuroscience*, New Orleans, LA.
- G. Lagoda, A. Vigdorichik, & E.M. Hull, 2003, Microinjection of a NOS inhibitor inhibits copulation in maive and sexually experienced male rats. *7th Annual Meeting of Society for Behavioral Neuroendocrinology*, Cincinnati, OH.
- S. Sato, C.D. Cedenno, Z. Xu, & E.M. Hull, 2003, Effects of cGMP manipulation on MPOA dopamine levels and copulation in male rats. *7th Annual Meeting of Society for Behavioral Neuroendocrinology*, Cincinnati, OH.
- J.M. Schmich, A.A. Loewle, & E.M. Hull, 2003, L-trans-2-4-PDC, a glutamate reuptake inhibitor, microinjected into the MPOA, may enhance male rat sex behavior. *7th Annual Meeting of Society for Behavioral Neuroendocrinology*, Cincinnati, OH.

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- Z. Xu & E.M. Hull, 2003, Tonic inhibition by the MPOA of the mesoaccumbens dopamine tract before and during male sexual behavior. *7th Annual Meeting of Society for Behavioral Neuroendocrinology*, Cincinnati, OH.
- J. M. Dominguez, J. W. Muschamp, J. M. Schmich, & E.M. Hull, 2003, Glutamate-evoked dopamine release in the medial preoptic area is mediated by nitric oxide: Implications for male rat sexual behavior. *Glutamate and Disorders of Cognition and Motivation*. Conference sponsored by the New York Academy of Sciences, Yale University, New Haven, CT.
- J. M. Dominguez, J. W. Muschamp, C. D. Cedeno, J. M. Schmich, & E.M. Hull, 2002, Glutamate-evoked dopamine release in the medial preoptic area is mediated by nitric oxide: Implications for male rat sexual behavior. *32nd Annual Meeting of Society for Neuroscience*, Orlando, FL.
- C. S. Faulring, R. Cruz, J. M. Dominguez & E.M. Hull, 2002, Chronic fluoxetine inhibits sexual behavior in the male rat: reversal with 8-OH-DPAT and partial reversal with LY-53,857. *32nd Annual Meeting of Society for Neuroscience*, Orlando, FL.
- S. Sato, J. V. Riolo, J. M. Dominguez, & E.M. Hull, 2002, Does cyclic GMP mediate the NO-induced DA release in the male rat MPOA? *32nd Annual Meeting, Society for Neuroscience*, Orlando, FL
- D. J. Smith & E.M. Hull, 2002, Motivational aspects of sexual satiety in male rats. *32nd Annual Meeting of Society for Neuroscience*, Orlando, FL.
- J. M. Dominguez & E.M. Hull, 2002, The medial amygdala regulates mating-induced dopamine release in the medial preoptic area. *International Academy of Sex Research Annual Meeting, Hamburg, Germany*.
- J. M. Dominguez, J. W. Muschamp, C. D. Cedeno, J. M. Schmich, & E.M. Hull, 2002, Glutamate-evoked dopamine release in the medial preoptic area is mediated by nitric oxide: Implications for male rat sexual behavior. *6th Annual Meeting of Society for Behavioral Neuroendocrinology*, Amherst, MA.
- C. S. Faulring, R. Cruz, J. M. Dominguez & E.M. Hull, 2002, Chronic fluoxetine inhibits sexual behavior in the male rat: reversal with 8-OH-DPAT and partial reversal with LY-53,857. *6th Annual Meeting of Society for Behavioral Neuroendocrinology*, Amherst, MA.
- S. Sato, J. V. Riolo, J. M. Dominguez, & E.M. Hull, 2002, Does cyclic GMP mediate the NO-induced DA release in the male rat MPOA? *6th Annual Meeting of Society for Behavioral Neuroendocrinology*, Amherst, MA.
- D. J. Smith & E.M. Hull, 2002, Motivational aspects of sexual satiety in male rats. *6th Annual Meeting of Society for Behavioral Neuroendocrinology*, Amherst, MA.
- J. M. Dominguez & E.M. Hull, 2002, The medial amygdala regulates mating-induced dopamine release in the medial preoptic area. In *The Amygdala in Brain Function: Basic and Clinical Approaches*. Conference sponsored by the New York Academy of Sciences, Galveston, TX.
- J. Dominguez, Xu, Z., & E.M. Hull, 2001, Lesions of the amygdala impair sexual behavior and attenuate levels of extracellular dopamine in the MPOA. *Monitoring Molecules in Neuroscience, 9th International Conference on In Vivo Methods*, Dublin, Ireland.
- J.M. Dominguez, D.S. Smith, C.S. Faulring, & E.M. Hull, 2001, Stimulation of the medial amygdala induces medial preoptic dopamine release: Implications for male sexual behavior. *31st Ann. Meet. Soc. Neurosci*, San Diego, CA.
- S.Sato & E.M. Hull, 2001, Co-localization of estrogen receptor-alpha immunoreactivity and A12, A13, and A14 TH-ir cells of male rats. *31st Ann. Meet. Soc. Neurosci*, San Diego, CA.
- D.J. Smith, J.M. Dominguez, & E.M. Hull, 2001, Reversal of sexual satiety by a 5-HT₂ receptor antagonist. *31st Ann. Meet. Soc. Neurosci*, San Diego, CA.

- J.S. Lonstein, J.D. Dominguez, S.K. Putnam, G.J. DeVries, & E.M. Hull, 2001, Intracellular preoptic and striatal dopamine and serotonin during pregnancy and lactation in rats. *31st Ann. Meet. Soc. Neurosci*, San Diego, CA.
- J.M. Dominguez, D.J. Smith, C.S. Faulring, & E.M. Hull, 2001, Stimulation of the medial amygdala induces medial preoptic dopamine release: Implications for male sexual behavior. *5th Annual Meeting of Society for Behavioral Neuroendocrinology*, Scottsdale, AZ.
- S.Sato & E.M. Hull, 2001, Co-localization of estrogen receptor-alpha immunoreactivity and nitric oxide synthase in the medial preoptic area. *5th Annual Meeting of Society for Behavioral Neuroendocrinology*, Scottsdale, AZ.
- C.S. Braham, S. Sato, & E.M. Hull, (2001) Co-localization of Fos and NOS after copulation. *5th Annual Meeting of Society for Behavioral Neuroendocrinology*, Scottsdale, AZ.
- D.J. Smith, J.M. Dominguez, & E.M. Hull, (2001) Reversal of sexual satiety by a 5-HT₂ receptor antagonist. *5th Annual Meeting of Society for Behavioral Neuroendocrinology*, Scottsdale, AZ.
- J. Dominguez, J.V. Riolo, Xu, Z., & E.M. Hull, 2000, Lesions of the amygdala impair sexual behavior and attenuate levels of extracellular dopamine in the MPOA. *30th Ann. Meet. Soc. Neurosci*, New Orleans, LA
- S. Sato & E.M. Hull, 2000, Co-localization of androgen receptor-ir and NOS-ir in the MPOA of male rats. *30th Ann. Meet. Soc. Neurosci*, New Orleans, LA
- C. Braham, S. Sato, & E.M. Hull, 2000, Colocalization of Fos and NOS after copulation. *30th Ann. Meet. Soc. Neurosci*, New Orleans, LA.
- E.M. Hull, 2000, Dopamine facilitates and serotonin inhibits male sexual behavior. Part of Symposium: What Brain Mechanisms Turn On or Off Motivated Behaviors? E.M. Hull, Chair, *American Psychological Assn.*, Washington, DC.
- S.K. Putnam, J. Riolo, S. Sato, & E.M. Hull, 2000, Hormonal maintenance of copulation in male castrates: Association with MPOA tissue dopamine levels. *4th Annual Meeting of Society for Behavioral Neuroendocrinology*, Madrid, Spain
- J. Dominguez & E.M. Hull, 2000, Lesions of the amygdala impair sexual behavior and attenuate levels of extracellular dopamine in the MPOA. *4th Annual Meeting of Society for Behavioral Neuroendocrinology*, Madrid, Spain
- J. Dominguez & E.M. Hull, 2000, Hormonal restoration of copulation in male castrates: Association with NOS-ir levels. *4th Annual Meeting of Society for Behavioral Neuroendocrinology*, Madrid, Spain
- E.M. Hull, 2000, Dopamine facilitates and serotonin inhibits male sexual behavior. Part of Symposium: Brain Control of Motivated Behaviors: How Does the Brain Tell the Difference? Bartley Hoebel, Chair, *Winter Conference on Brain Research*, Breckenridge, CO.
- S.K. Putnam, J. Riolo, S. Sato, & E.M. Hull, 1999, Hormonal maintenance of copulation in male castrates: Association with MPOA dopamine levels. *29th Ann. Meet. Soc. Neurosci*, Miami Beach, FL.
- J. Dominguez & E.M. Hull, 1999, Influence of olfactory exposure to an estrous female on nitric oxide synthase in the MPOA of male rats. *29th Ann. Meet. Soc. Neurosci*, Miami Beach, FL.
- S. Sato & E.M. Hull, 1999, Androgen-sensitive neurons in A13 and A14 hypothalamic dopaminergic cell groups of male rats. *29th Ann. Meet. Soc. Neurosci*, Miami Beach, FL.
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- S. Sato & E.M. Hull, 1999, Androgen-sensitive neurons in A13 and A14 hypothalamic dopaminergic cell groups of male rats. *3rd Annual Meeting of the Society for Behavioral Neuroendocrinology*, Charlottesville, VA.
- S.K. Putnam, S. Sato, & E.M. Hull, 1999, Hormonal maintenance of copulation in male rat castrates: Association with nitric oxide synthase activity in the medial preoptic area *3rd Annual Meeting of the Society for Behavioral Neuroendocrinology*, Charlottesville, VA,
- J. Dominguez & E.M. Hull, 1999, Pheromonal exposure increases NOS immunoreactive neurons in the MPOA of male rats. *3rd Annual Meeting of the Society for Behavioral Neuroendocrinology*, Charlottesville, VA.

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- J.J. Panos, S. Sato, W.S. Powell, S.K. Putnam, J. Du, V.P. Markowski, J. Dominguez & E.M. Hull, 1998, The effects of prenatal TCDD treatment on male sexual behavior in rats. *28th Annual Meeting of Society for Neuroscience*, Los Angeles.
- J.V. Riolo, C.E. Davidson, R.D. Friedman, & E.M. Hull, 1998, Microinjection of specific 5-HT₂ and 5-HT_{1A} agonists and antagonists: Effects on male rat copulatory behavior. *2nd Annual Meeting of Society for Behavioral Neuroendocrinology*, Atlanta.
- S.K. Putnam, J.J. Panos, & E.M. Hull, 1998, Hormonal maintenance of copulation in male rat castrates: Association with MPOA dopamine response. *2nd Annual Meeting of Society for Behavioral Neuroendocrinology*, Atlanta.
- Du, J., Smith, C. J., & Hull, E.M. 1997 Sexual experience increases NOS-positive neurons in MPOA of male rats. *27th Ann. Meet. Soc. Neurosci*.
- Dodge, J. C., Panos, J. J., Illig, A. M., Badura, L. L., & Hull, E.M. 1997 Endogenous release of GABA within the mPOA during copulatory behavior in male rats. *27th Ann. Meet. Soc. Neurosci*.
- Lorrain, D. S., Matuszewich, L., Friedman, R. D., Dominguez, J., Putnam, S., & Hull, E.M. 1997. Lateral hypothalamic 5-HT release may influence mesolimbic dopamine during the male rat's PEI. *27th annual meeting of the Society for Neuroscience*.
- Matuszewich, L., Lorrain, D. S., & Hull, E.M. 1997. Modulation of extracellular dopamine in the medial preoptic area of female rats in different mating contexts. *27th Ann. Meet. Soc. Neurosci*.
- Hull, E.M., Du, J., Lorrain, D., Matuszewich, L., & Putnam, S. 1997 Hormonal control of MPOA dopamine and copulation. *1st meeting of the Society for Behavioral Neuroendocrinology*.
- Dominguez, J., Davis, R., Lorrain, D., & Hull, E.M. 1997. A dopamine agonist in the MPOA of male rats restores copulation after amygdala lesions. *1st meeting of the Society for Behavioral Neuroendocrinology*.
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