#### **CURRICULUM VITAE**

Donna J. Toufexis

**Professional Address** 

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EDUCATIONAL HISTORY

McGill University (Dept. of Neurology and Neurosurgery) Montreal, Que., Canada, 1994-1999 Doctor of Philosophy (Neuroendocrinology)

Concordia University (Dept. of Biology) Montreal, Que., Canada, 1992-1994 Master of Science (Insect Neurobiology)

Concordia University (Dept. of Biology) Montreal, Que., Canada, 1987-1992 Bachelor of Science (Biology)

PROFESSIONAL POSITIONS Associate Professor, Department of Psychological Science, University of Vermont, Burlington VT. (2014-present day)

Assistant Professor, Department of Psychology, University of Vermont, Burlington VT. (2008-Spring 2014)

Assistant Research Professor, Division of Development and Cognitive Neuroscience, Yerkes National Primate Research Center, Emory University, and Atlanta GA. (2008-present day)

Research Associate, Department of Psychiatry and Behavioral Science, Emory University School of Medicine. Atlanta GA. (2005-2008)

Post-Doctoral Fellow, Center for Behavioral Neuroscience, Associated with Emory University. Atlanta, GA. (2001–2005)

Post-Doctoral Fellow, Center for Studies in Behavioral Neurobiology, Associated with Concordia University. Montreal, Que. (1999-2001) Teaching Assistant, Department of Biology, Concordia University. Montreal, Que. (1993-1994)

Laboratory Instructor, Department of Biology, Concordia University. Montreal, Que. (1992)

### HONORS AND AWARDS

Deans Honor List, Concordia University (1994)

McGill University Internal Research Fellowship (Competitive Grant, June 1997)

Center for Behavioral Neuroscience Fellowship (2001-2002) Renewed for an additional year (2003).

Travel Award, University Of Wisconsin: Health and Emotions Conference (2002)

Travel Award, National Science Foundation, to attend PBB Conference "Gender Differences and Drug Abuse" in Morzine, France (2004)

# PUBLICATIONS (45)

### Articles published in peer-reviewed journals

- 1) King SB, Lezak K, O'Reilly M, **Toufexis D**, Falls W, Braas K, May V, Hammack S. The Effects of Prior Stress on Anxiety-like Responding to Intra-BNST Pituitary Adenylate Cyclase Activating Polypeptide (PACAP) in Male and Female Rats. Neuropsychopharmacology (2017 in press)
- 2) Toufexis DJ, Lipatova O, Johnson AC, Abizaid A. (2016) Food-Restriction Lowers the Acoustic Startle Response in both Male and Female Rats, and, in Combination with Acute Ghrelin Injection, Abolishes the Expression of Fear-Potentiated Startle in Male Rats. J Neuroendocrinol. Nov;28(11). doi: 10.1111/jne.12436.
- 3) Lipatova O, Wiener N, Andrews K, Kirshenbaum AP, Green JT, Toufexis DJ. (2016) 17β-estradiol replacement in ovariectomized female rats slows set 1 dorsolateral striatial-dependent learning and enhances learning of set 2 in an extradimensional set-shifting paradigm. Behav Neurosci. 2016 Feb;130(1):44-9. doi: 10.1037/bne0000119
- 4) Lipatova O., Campolattaro M.M., **Toufexis D.**, Mabry E.A. (2015) Place and response Learning in the open-field tower maze. J Vis Exp. 2015 Oct 28;(105):e53227.

- 5) Moore C.J., Johnson Z.P., Higgins M., **Toufexis D.**, Wilson M.E. (2015) Antagonism of corticotrophin-releasing factor type 1 receptors attenuates caloric intake of free-feeding subordinate female rhesus monkeys in a rich dietary environment. J Neuroendocrinol. 2015 Jan;27(1):33-43.
- 6) **Toufexis, D.**, Riverola, A.M., Lara, H. and Viau, V., (2014) Stress and the Reproductive Axis, *In press in J. Neuroendocrinology*.
- 7) Lezak, K. R., Roelke E., Harris, O., Choi, I., Edwards, S., Gick, N., Cocchiaro, G., Missing,G., Roman,C.W., Braas, K. M., **Toufexis, D.J.**, May, V., Hammack, S. E. (2014) Pituitary adenylylayclase activating peptide (PACAP) in the bed nucleus of the stria terminalis (BNST) increases corticosterone in male and female rats. *Psychoneuroendocrinology*, 45,11-20.
- 8) Lipatova, O.,Bryd, d., Green, J.T., **Toufexis, D.** (2014) The effect of cycling versus chronic estrogen in female rats on the acquisiton and expression of place and response learning in the open field tower maze. *The Neurobiology of Learning and Memory*, May 14, 114C:81-89.
- 9) Kocho-Schellenberg, M., Lezak, K.R., Harris, O.M., Roelke, E., Gick, N., Choi, I., Edwards, S., Wasserman, E., **Toufexis, D.J.**, Braas, K.M., May, V., Hammack, S.E. (2014) PACAP in the BNST Produces Anorexia and Weight Loss in Male and Female Rats. *Neuropsychopharmacology*, 39(7), 1614-23.
- 10)Michopoulos, V., Diaz, M.P., Embree, M., Reding, K., Votaw, J.R., Mun, J., Voll, R.J., Goodman, M.M., Wilson, M., Sanchez, M., **Toufexis D**. (2014) Oestradiol alters central 5HT1A receptor binding potential differences related to psychosocial stress but not differences related to 5HTTLPR genotype in female rhesus monkeys. *J. Neuroendocrinology*, 26(2), 80-8.
- 11)Hare, B.D., Beierle, J.A., **Toufexis, D.J.**, Hammack, S.E., Falls, W.A. (2014) Exercise-Associated Changes in the Corticosterone Response to Acute Restraint Stress: Evidence for Increased Adrenal Sensitivity and Reduced Corticosterone Response Duration. *Neuropsychopharmacology*, 39(5), 1262-9.
- 12)Moore, C.J., Michopoulos, V., Johnson Z., **Toufexis**, **D**, & Wilson, M.E. (2013) Dietary variety is associated with larger meals in female rhesus monkeys. *Physiology and Behavior*, 2;119, 190-4
- 13)Michopoulos V., Embree M., Reding K., Sanchez M.M., **Toufexis D**., Votaw J.R., Voll R.J., Goodman M.M., Rivier J., Wilson M.E., & Berga S.L. (2013) CRH receptor antagonism reverses the effect of social subordination upon central GABAA receptor binding in estradiol-treated ovariectomized female rhesus monkeys. *Neuroscience*, 10;250, 300-8.

- 14)Eddy, M.C., Rifken, K.M., **Toufexis, D. J.**, & Green J.T. (2013) Sex Hormones and Voluntary Exercise Interact to Improve Discrimination Ability in a Set-Shift Task. *Behavioral Neuroscience*, 127(5), 744-54.
- 15) Johnson, Z., Lowe, J., Michopoulos, V., Moore, C., Wilson, M.E., & Toufexis D. (2013) Estradiol differentially influences stress-induced feeding depending on diet composition in female rhesus monkeys. *Journal of Neuroendocrinology* 25(8), 729-41
- 16)Asher J., Michopoulos V., Reding K.M., Wilson M.E., **Toufexis D**. (2013) Social stress and the polymorphic region of the serotonin reuptake transporter gene modify estradiol-induced changes on central monoamine concentrations in female rhesus monkeys. *Journal of Neuroendocrinology*. 25(4), 321-328.
- 17)Moore C.J., Lowe J., Michopoulos V., Ulam P., **Toufexis** D., Wilson M.E., Johnson Z. (2013) Small changes in meal patterns lead to significant changes in total caloric intake. Effects of diet and social status on food intake in female rhesus monkeys. *Appetite.* 62, 60-69.
- 18)Lipatova O., & Toufexis D. (2013) Estrogen enhances the retention of spatial reference memory in the open field tower task, but disrupts the expression of spatial memory following a novel start position. *Neurobiology* of Learning and Memory. 99, 50-58.
- 19)Reding K., Michopoulos V., Wallen K., Sanchez M., Wilson M.E., **Toufexis D**. (2012)Social status modifies estradiol activation of sociosexual behavior in female rhesus monkeys. *Hormones and Behavior*. 62(5), 612-620.
- 20)Michopoulos, V., Reding, K., Wilson M.E.,& **Toufexis D**. (2012) Social subordination impairs hypothalamic-pituitary-adrenal function in female rhesus monkeys. *Hormones and Behavior*: 62(4), 389-399.
- 21)Tung, J., Barreiro, L.B., Johnson, Z.P., Hansen, K.D., Michopoulos, V., **Toufexis D.**, Michelini, K., Wilson, M.E., & Gilad Y. (2012) Social environment is associated with gene regulatory variation in the rhesus macaque immune system. *Proceedings of the National Academy of Science U S A*. 109(17), 6490-6495.
- 22)Michopoulos, V, **Toufexis, D.,** & Wilson M.E. (2012) Social stress interacts with diet history to promote emotional feeding in females. *Psychoneuroendocrinology*. 37(9),1479-90.

- 23)Michopoulos, V., Higgins, M., **Toufexis, D.**, & Wilson M.E. (2012) Social subordination produces distinct stress-related phenotypes in female rhesus monkeys. *Psychoneuroendocrinology*, 37(7),1071-85.
- 24) **Toufexis, D.J.**, & Wilson, M.E. (2012) Dihydrotestosterone differentially modulates the cortisol response of the hypothalamic-pituitary-adrenal axis in male and female rhesus macaques, and restores circadian secretion of cortisol in females. *Brain Res*earch, 1429, 43-51
- 25)Nillni, Y.I., **Toufexis, D.J.,** & Rohan, K. J. (2011) Anxiety sensitivity, the menstrual cycle, and panic disorder: A putative neuroendocrine and psychological interaction. *Clinical Psychology Review*, *31(7)*, 1183-119.
- 26)Ressler, K.J., Mercer, K.B., Bradley, B., Jovanovic, T., Mahan, A., Kerley, K., Norrholm, S.D., Kilaru, V., Smith, A.K., Myers, A.J., Ramirez, M., Engel, A., Hammack, S.E, **Toufexis, D.**, Braas, K.M., Binder, E.B.,& May, V.(2011) Posttraumatic stress disorder is associated with PACAP and the PAC1 receptor. *Nature*, 470(7335), 492-497.
- 27)Keen-Rhinehart, E., Michopoulos, V., **Toufexis**, **D.J.**, Martin, L., Davis, M., Ressler, K., Nemeroff, C., & Wilson, M.E. (2009) Continuous expression of Corticotropin Releasing Hormone in the central nucleus of the amygdala emulates the dysregulation of the stress and reproductive axes. *Molecular Psychiatry*, *14* (1), 37-50.
- 28) Shepard, K.N., Michopoulos, V., Toufexis, D.J. & Wilson, M.E. (2009) Genetic, epigenetic and environmental impact on sex differences in social behavior.
  Physiology & Behavior, 97, 157–170. (Invited review for a special edition of Physiology and Behavior on Sex differences).
- 29)**Toufexis, D.J.**, Myers, K.M., Bowser, M.E., & Davis, M. (2007). Estrogen disrupts the inhibition of fear in female rats: possibly through the antagonistic action of ERα and ERβ. *Journal of Neuroscience, 36*, 9729-9735.
- 30)Mao, H., Toufexis, D.J., Wang, X., Lacreuse, A, & Wu, S. (2007). Changes of metabolite profile in kainic acid induced hippocampal injury in rats measured by the HRMAS NMR. *Experimental Brain Research*. 183, 477-485.
- 31) Toufexis, D. (2007). Region-and sex-specific modulation of anxiety in the rat: An invited "Young Investigator Perspective" review. Journal of Neuroendocrinology, 19, 461-474.
- 32)**Toufexis, D.J.**, Myers, K.M. & Davis, M. (2006). The effect of gonadal hormones and gender on anxiety and emotional learning in the rat. Invited Review: *Hormones and Behavior, 50,* 539-549.

- 33)**Toufexis, D.J.**, Davis, C., Hammond, A., & Davis, M. (2005). Sex differences in hormonal modulation of anxiety measured with light enhanced startle: a possible role of arginine vasopressin in the male. *Journal of Neuroscience*, *25*, 9010-9016.
- 34)**Toufexis, D.J.**, Davis, C., Hammond, A., & Davis, M. (2004). Progesterone attenuates CRF-enhanced startle, but not fear-potentiated startle, through the activity of its metabolite allopregnanolone. *Journal of Neuroscience, 24*, 10280-10287.
- 35)Walker, D.L., **Toufexis, D.J.,** & Davis, M. (2003). Role of the bed nucleus of the stria terminalis versus the amygdala in fear, stress, and anxiety. *European Journal of Psychopharmacology, 463,* 199-216.
- 36)**Toufexis, D.J.**, Kyriazis, D., & Woodside, B. (2002). Chronic NPY Y5 receptor stimulation suppresses reproduction in virgin female and lactating rats. *Journal of Neuroendocrinology*, *15*, 492-497.
- 37)**Toufexis, D.J.,** Yorozu, S., & Woodside B. (2002). Y1 receptor activation is involved in the effect of exogenous NPY on reduced pup weight and the early termination of lactational diestrus in the postpartum rat. *Journal of Neuroendocrinology*, *14*, 354-360.
- 38) Walker, C-D, **Toufexis, D.J.**, & Burlet A. (2001). Hypothalamic and limbic expression of CRF and AVP during lactation: Implications for the control of ACTH secretion and stress hyporesponsiveness. *Progress in Brain Research*, *133*, 99-110. (Special edition on the Maternal Brain)
- 39)**Toufexis, D.J.**, Tesolin, S., Huang, N., & Walker, C-D. (1999). Altered pituitary sensitivity to corticotropin-releasing factor and arginine vasopressin participates in the stress hyporesponsiveness of lactation. *Journal of Neuroendocrinology*, *11*, 757-764.
- 40)**Toufexis, D.J.**, Rochford, J., & Walker, C-D. (1999). Lactation induced reduction in acoustic startle is associated with changes in noradrenergic neurotransmission. *Behavioral Neuroscience*, *113*, 76-84.
- 41)**Toufexis, D.J.**, Thrivikraman, K.V., Plotsky, P.M., Morilak, D.A., Huang, N., & Walker, C-D. (1998). Reduced noradrenergic tone to the hypothalamic paraventricular nucleus contributes to the stress hyporesponsiveness of lactation. *Journal of Neuroendocrinology*, *10*, 417-427.
- 42)Trottier, G., Brun, T., **Toufexis, D.J.**, Koski, K.G., Richard, D., & Walker, C-D. (1998). Increased fat intake during lactation modifies hypothalamic-

pituitary-adrenal responsiveness in developing rat pups. *Endocrinology*, *139*, 3704-3711.

- 43)Walker, C-D, Bodnar, M, Forget, M.J., **Toufexis, D. J.**, & Trottier, G. (1997). Stress et plasticite neuroendocrinienne. *Medicine/Science, 13*, 509-518.
- 44)**Toufexis, D.J.**, & Walker, C-D. (1996). Noradrenergic facilitation of the adrenocorticotropin response to stress is absent during lactation in the rat. *Brain Research*, *737*, 71-77.
- 45)**Toufexis, D.J.**, Albert, P.J., & Bauce, E. (1996). Age-related responses from the maxillary sensilla styloconica of Choristoneura fumiferana larvae to foliage extracts from balsam fir host. *Entomologia Experimentalis et Applicata, 78,* 129-133.

Articles currently under review in peer-reviewed journals:

<u>1. Invited Review:</u> King S.B., Toufexis D.J .& Hammack S.E. Pituitary adenylate cyclase activating polypeptide (PACAP), stress and sex hormones. Submitted January 2017 to Stress

Articles currently under preparation for submission to peer-reviewed journals:

1. <u>Invited Review:</u> **Toufexis, D.J.** & Michopoulos, V. Aging in female macaque monkeys: focus on the interaction of social stress with estrogen. Current Psychiatry Reports

### <u>Books</u>

Hammack S.E., & **Toufexis, D.J.** (2006). *Anti-Anxiety Drugs.* Langhorne, P.A.: Chelsea House Publishing.

### **Book Chapters**

1. Sullivan, R., **Toufexis, D.J.**, and Wilson, D. (2008) Development of olfactory modulated approach and avoidance motivation. In A.J. Elliott (Ed.), *Handbook of Approach and Avoidance Motivation.* (New York, New York: *Psychology Press*, pp 127-150)

 Myers, K.M., **Toufexis, D.J.,** Davis, M., Winslow, J.T., Jovanovec, T., Norrholm, S.D., Duncan, E.J., & Rothbaum, B.D. (2009) Implications of Animal Fear Models for Assessing the Role of the Human Amygdala in Psychopathology. In P. Whalen & E. Phelps (Eds.), *The Human Amygdala* (New York, New York: *The Guilford Press* pp 61-81)

#### Abstracts

- 1. Schoenberg, H. Seyller, E., Trask, S., Kirshenbaum, A., & Toufexis D. Methamphetamine pre-exposure produces habitual responding to sucrose in female, but not male, rats. Submitted to the Annual meeting for the Society for Behavioral Neuroendocrinology in Montreal, PQ, August 2016.
- Bauerle H., Dillon A., Maclean G., Talbot M., Crotty A., & Toufexis D. The influence of prenatal stress on behaviors associated with schizophrenia and autism spectrum disorder. Submitted to the 43 st Annual Meeting of the Society for Neuroscience, Washington DC, November 2014.
- 3. Toufexis, D. & Lipatova O. Estrogen modulates the expression of the serotonin 6 receptor in the rat brain. Submitted to the Annual meeting for the Society for Behavioral Neuroendocrinology in Atlanta, GA, June 2013.
- 4. Lipatova, O. & Toufexis, D. Effects of chronic vs cycling estrogen treatment on acquisition, retention, and expression of spatial memory. Submitted to the Annual meeting for the Society for Behavioral Neuroendocrinology in Atlanta, GA, June 2013.
- 5. Michopoulos, V., Perez, V., Embree, M., Reding, K., Wilson, M., Toufexis, D. & Sanchez, M. Social stress and estradiol synergistically diminish 5HT1A receptor binding potential in female rhesus monkeys. Submitted to the Annual meeting for the Society for Behavioral Neuroendocrinology in Atlanta, GA, June 2013.
- 6. Reding, M., Wallen, K., Sanchez, M., Wilson, M., & Toufexis, D. Psychosocial stress and estradiol interact to suppress sociosexual behavior in rhesus female monkeys. Submitted to the Annual meeting for the Society for Behavioral Neuroendocrinology in Atlanta, GA, June 2013.
- 7. Reding, K.M., Fair, D.A., Wilson, M.E., Toufexis, D., & Sanchez, M.M. Chronic psychosocial stress and estradiol alter amygdalo-cortical intrinsic functional connectivity. Submitted to the Annual meeting for the Society for Biological Psychiatry in San Francisco, CA, May 2013.

- 8. Reding, K. M., Wallen, K., Sanchez, M., Wilson, M. E., & **Toufexis, D.J.** Estradiol increases peripheral but not central oxytocin in female rhesus monkeys Submitted to the 41 <sup>st</sup> the Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 2012.
- 9. Crotty, A., Nishi, R., Eckenstein, F., Newhouse, P., Potter, A., & **Toufexis, D.** Elevated fear and anxiety in *lynx2* KO mice are inconsistent over several behavioral paradigms. Submitted to the 41 st the Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 2012.
- 10. Harris, O., Nishi, R., Eckenstein, F., Newhouse, P., Potter, A., & **Toufexis, D.** Lynx1 is involved in fear and anxiety behavior. Submitted to the 41 <sup>st</sup> the Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 2012.
- 11. Michopoulos, V., Sanchez, M.M., Votaw, J.R., Rivier, J., Loucks, T.L., **Toufexis**, **D.**, Wilson, M.E., & Berga, S.L. Central GABA receptor binding in female rhesus monkeys is modified by social status in female monkeys following CRH receptor antagonism. Submitted to the 41<sup>st</sup> the Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 2012.
- 12. Moore, C.J., Michopoulos, V., **Toufexis, D.**, Johnson, Z., & Wilson, M.D. Dietary variety is associated with increased meal size in female rhesus monkeys. Submitted to the 41 st the Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 2012.
- 13. K. Reding, B. Howell, **D. Toufexis**, M. E Wilson, & M. M Sanchez. Estradiol treatment increases global measures of white matter structural integrity using diffusion tensor imaging. The Annual meeting for the Society for Behavioral Neuroendocrinology held in Madison, WC, June 2011.
- 14. O. Lipatova, & D.J. Toufexis. Estrogen improves the retention of spatial memory but not its acquisition, and enhances the fear of novel situations. Annual Meeting of the Society for Behavioral Neuroscience, Queretaro, Mexico. June 23-26, 2011,
- 15. K. Reding, V. Michopoulos, J. Godfrey, M.E. Wilson, & **D. Toufexis.** Chronic Psychosocial Stress Attenuates the Behavioral Efficacy of Estradiol in Female Rhesus Monkeys. Annual Meeting for the Society for Behavioral Neuroscience, Queretaro, Mexico. June 23-26, 2011.
- 16. A. Chapman, & D. J. Toufexis. The Role of Ghrelin in the Expression of Cued-Fear Conditioning. The 40th Annual Meeting of the Society for Neuroscience, Washington D.C., November 12-16, 2011.

- 17. V. Piraino, J. Leinwand, K.M. Brass, V. May, S.E. Hammack, & **D. J.Toufexis**. Effects of PACAP38 infusion in the bed nucleus of the stria terminalis on weight in female rats: the role of estrogen. The 40th Annual Meeting of the Society for Neuroscience, Washington D.C., November 12-16, 2011.
- 18. **D.J. Toufexis**, & M.E. Wilson. Androgens modulate the reactivity of the HPA axis in male and female rhesus monkeys. 39th Annual Meeting of the Society for Neuroscience, San Diego CA Nov 15-18, 2010.
- 19. O. Lipatova, V. May, & **D. J. Toufexis.** Estrogen disruption of fear inhibition may involve down-regulation of the 5-HT6 receptor in the striatum and the bed nucleus of the stria terminalis in female rats. 39th Annual Meeting of the Society for Neuroscience, San Diego CA Nov 15-18, 2010.
- 20. V. Michopoulos, **D. J. Toufexis**, & M. E. Wilson. Behavioral and physiological phenotype of female rhesus monkeys is dependent upon estradiol, social status and serotonin reuptake transporter gene polymorphism. 39th Annual Meeting of the Society for Neuroscience, San Diego CA Nov 15-18, 2010.
- 21. V. Michopoulos, C. Barrett, M.E. Wilson, & **D. Toufexis**. Dose-dependent effects of estrogen receptor specific agonists on physiology and behavior in female rhesus monkeys. Annual Society for Behavioral Neuroscience, Meeting, Toronto, Canada July 18-21, 2010.
- 22. **D. J. Toufexis**, A. Maye, B. Nalty, M. Bowser, & M.I Davis. Antagonism of the serotonin 6 receptor disrupts the inhibition of fear in rats. 38th Annual Meeting of the Society for Neuroscience, Chicago IL. Oct 15-19, 2009.
- 23. D J. Toufexis, Myers, K.M. & Davis, M. Opposing effects of ERα and ERβ activation in an aversive discrimination learning paradigm. The Annual Meeting for the Society of Behavioral Neuroscience, Pittsburgh, PA. June 17-20, 2006.
- 24. Mao H., **Toufexis, D.J.**, Wang, X, Wu, S. & Lacreuse, A. Metabolic responses in Kanic acid induced lesion in rats. International Society for Magnetic Resonance in Medicine, Seattle, WA, 2006.
- 25. **Toufexis, D. J.**, Davis, C., Hammond, A.S. & Davis, M. Testosterone is involved in modulating light-enhanced, but not fear potentiated, startle in male rats: possible role for arginine vasopressin. 34th Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov, 2004.
- 26. **Toufexis, D. J.,** Hammond, A.S. & Davis, M. The effect of estrogen and tamoxifen on slow-acquisition fear conditioning in female rats. Women's Health Initiative Conference, University of North Carolina, Wake Forest, October, 2003.

- 27. **Toufexis, D.J.**, Walker, D.L., & Davis, M. Involvement of plasma testosterone in modulating light-enhanced startle in male rats: possible role for arginine vasopressin. Annual Meeting for the Society for Behavioral Neuroendocrinology, Cincinnati, OH, June, 2003.
- 28. **Toufexis, D.J**., & Davis, M. Involvement of progesterone in the reduction of CRF-enhanced startle during lactation in the rat. 32nd Annual Meeting of The Society for Neuroscience, Orlando FL, Nov, 2002.
- 29. Walker, D.L, **Toufexis, D.J.** & Davis. M. Sex-differences in the expression of light-enhanced startle in the rat. Submitted to the 32nd Annual Meeting of The Society for Neuroscience, Orlando, FL, Nov, 2002.
- 30. **Toufexis D.J.**, LaRoche, J., & Woodside, B. Changes in metabolic load alter stress-induced c-fos expression in the paraventricular (PVN) and supraoptic (SON) nuclei in the post-parturient rat. 30th Annual meeting of The Society for Neuroscience, New Orleans, LA, Nov, 2000.
- 31. Walker, C-D., **Toufexis, D.J.**, Abizaid, A., Junien, J-L., & Woodside, B. Neuropeptide Y (NPY) Y5 receptor stimulation lengthens the duration of lactational diestrus: possibly through inhibition of luteinizing hormone (LH) release. 30th Annual meeting of The Society for Neuroscience, New Orleans LA., Nov 2000.
- 32. **Toufexis, D.J.,** & Woodside, B.S. Differential effect of Y1 and Y2 receptor activation underlies reduced pup growth and the early return to estrus in chronic neuropeptide Y-treated lactating rats. 29th Annual meeting of The Society for Neuroscience, Miami Beach, FL, Oct 1999.
- 33. Walker, C-D., **Toufexis, D.J.**, & Burlet, A. Increased colocalization of CRF and AVP in hypothalamic PVN neurons during lactation has functional implications for the control of ACTH secretion. The Maternal Brain Conference, Bristol, UK., July 1999.
- 34. **Toufexis, D.J.**, Rochford, J., & Walker, C-D. Changes in noradrenergic neurotransmission during lactation affect the expression of acoustic startle in the rat. 28th Annual meeting of The Society for Neuroscience, Los Angeles, CA, Nov 1998.
- 35. Tesolin, S., **Toufexis, D.J.**, Huang, N. & Walker, C-D. Pituitary ACTH response to arginine vasopressin (AVP) but not corticotropin-releasing hormone (CRH) is greatly enhanced during lactation in the rat. 28th Annual meeting of The Society for Neuroscience, Los Angeles, CA, Nov 1998.

- 36. Francis, D., **Toufexis, D.J.**, Brake, W.G., Liu, D. & Meaney, M.J. Natural variations in maternal licking and grooming behavior. How do these mothers differ? 28th Annual meeting of The Society for Neuroscience, Los Angeles, CA, Nov 1998.
- 37. **Toufexis. D.J.** & Walker, C-D. Noradrenergic regulation of the adrenocortical axis is altered during lactation in the rat. 27th Annual meeting of The Society for Neuroscience, New Orleans, LA, Oct 1997.
- 38. **Toufexis, D.J.** & Walker, C-D. Reduction in noradrenergic potentiation of the stress response during lactation in the rat is associated with changes in adrenergic alpha-2 receptor density in the paraventricular nucleus (PVN). 26th Annual meeting of The Society for Neuroscience, Washington D.C., Nov 1996.
- 39. Albert, P.J., **Toufexis, D.J.**, & Bauce, E. Age differences in the chemosensory response of larvae of the spruce budworm (Choristoneura fumiferana) to sucrose. 9th International Symposium on Insect-Plant Relationships, Gwatt, Switzerland, June 1995.

### GRANTS

### Current grant support

### National Institute of Mental Health Grant MH097988: (2012-2017) PACAP and the response to stressors, neural mechanisms Sayamwong Hammack: Principal Investigator \$1,250,000.00 Direct Costs This grant looks at the effect of the neuropeptide PACAP on brain circuitry mediating and behavioral responses to stress. Role: Co-Investigator.

# Small Grant Research Award for the amount of \$2,570 (2016) (CAS)

**CAPTR Pilot grant (**with Kelly Rohan, Jamie Abaied, and Ali Rellini**)** for the amount of \$4,563

### Previous grant support

National Institute of Mental Health Grant MH08181603-S: April 2012-April 2013 \$169,000.00 Direct Cost.

*Competitive supplement for psychosocial disruption of estradiol action on behavior* Role: Principal Investigator

National Institute of Mental Health Grant MH081816 Awarded: April 2009-April 2013,

\$1,505,129.00 Direct Costs

*Psychosocial disruption of estradiol action on behavior* This grant examines the effect of psychosocial stress on the motivational and

emotional effects of estrogen in a non-human primate model.

Role: Principal Investigator

Center of Biomedical Research Excellence (COBRE) Pilot Grant: August 2011-June 2012.

The Involvement of Lynx2 in nicotinic acetylcholine receptor signaling in the prefrontal cortex and amygdala

\$50,000.00 Direct Costs

Role: Principal Investigator

This grant examined the effect of lynx2, a protein that gates the activity of the nicotinic receptor, on fear behavior using a knock-out mouse model. Role: Principal Investigator

Challenge Grant: RFA-OD-09-003: September 2009-September 2011 Challenge Area: 15: Translational Science, Rae Nishi: Principal Investigator \$1,000,000.00 Direct funds This grant looked at the role of endogenous prototoxins on the addictive quality of nicotine and on brain morphology in adolescent and adult brains. Role: Co-Investigator.

National Institute of Mental Health Grant MH76869: January 2007-January 2009 \$244,000.00 Direct Funds This grant examined the effect of gonadal steroids on Pavlovian fear conditioning using a discriminatory learning paradigm. Role: Principal Investigator

<u>Center for Behavioral Neuroscience: 1 year Venture Grants</u> (small \$10,000-\$20,000 seed grants)

Limbic CRH Over Expression Targets the Reproductive Axis: Spring 2006 M. E. Wilson, Principal Investigator This grant examined the reproductive effects of lenti-viral vector-induced hyperexpression of CRF in the amygdala and the bed nucleus of the stria terminalis. Role: Co-Investigator

Developing a model to study the adverse effects of childhood obesity on reproduction and metabolism: Spring 2005 M. Wilson, Principal Investigator This grant examined the effect of body weight and obesity on determining the age of puberty in female Rhesus Monkeys Role: Co-Investigator The Effect of Estrogen and Tamoxifen on Fear-conditioning in the Female Rat: Fall 2003

This grant looked at the effect of estrogen and tamoxifen on fear learning in female rats.

Role: Principal Investigator

The Neurobiology of Maternal Behavior: Spring 2001 This grant looked at changes in gene expression in female rats during the postpartum period. Role: Principal Investigator

### PROFESSIONAL SOCIETY MEMBERSHIPS

Society for Neuroscience Society for Behavioral Neuroendocrinology Organization for the Study of Sex Differences

### **RELATED WORK**

September 1995-December 1998: Editor, *McGill Journal of Medicine*, McGill University. Montreal, Que.

Summer 2002: Developed Neuroscience Curriculum for Morris Brown University Psychology Department.

Fall 2002: Taught course "Mind and Brain" Morehouse College, Atlanta, Georgia

Winter 2003: Taught course "Mind and Brain" Morehouse College, Atlanta, Georgia

Fall 2003 Co-taught "Thinking, feeling & sex" Center for Behavioral Neuroscience Graduate course

Fall 2004: Taught Genetics 320 (2nd year undergraduate level) at Spelman College, Atlanta Georgia.

Spring 2006 and Spring 2007: Served on the Education Committee for the 10th annual meeting of the Society for Behavioral Neuroscience.

Fall 2007 and spring 2008: Taught laboratory for Research Methods for the Psychology Department at Spelman College.

### MENTORING

<u>Dissertation Supervisor</u> Olga Lipatova (Ph.D. Spring 2014) Hannah Schoenberg (continuing graduate student)

<u>Masters Thesis</u> Harold Baurele (M.S. 2015)

<u>Neuroscience Research Rotation Supervisor</u> Abbie Chapman (2011) Liana Merrill (2010)

<u>Graduate Student Preliminary Project Committee</u> Leslie Crimin-Clinical Psychology (2010)

<u>Dissertation Committee Member</u> Nolan Rampy-Psychology (2015) Jennifer Mahon-Clinical Psychology (2015) Brendan Hare-Biopsychology (2015) Kathy Reding-Psychology (at Emory University)(2014) James Fox-Psychology (2010)

External examiner on Ph.D Thesis Committee Nicole Gervais (Psychology) Concordia University (2014) Anne Almey (Psychology) Concordia University (2015)

<u>Masters Committee</u> Cecilia Bergeria (2016) Bonnie Cantrell (chair) (underway in 2016-17)

**Undergraduate Honors Advisor** 

John Mlcuch-Undergraduate in Psychology (underway in 2016-17) Caleb Winn –Undergraduate in Neuroscience (underway in 2016-17) Emily Sola-Undergraduate in Psychology (underway in 2016-17) Ellen Seyller- Undergraduate in Molecular Biology (2016) Jessica Naa Jama Odeti–Undergraduate in Psychology (2010) Elizabeth Schrader–Undergraduate in Psychology (2010)

Honors Thesis Committee Member Jenny Michael-Undergraduate in Biology (underway in 2016-17) Rachel Mellen-Undergraduate in Biology (2016) Morgan Mathews-Undergraduate in Neuroscience (2016) Naomi Koliba (2016) Katherine Rifki- Undergraduate in Psychology (2012) Meagan Quinlin-Undergraduate in Psychology (2012) Erin McGee–Undergraduate in Psychology (2010) Julia Camuso – Undergraduate in Psychology (2010)

### Independent Study Advisor

Victoria Diederich-Undergraduate in Neuroscience (underway in 2016-17) Cheryl Acampora- Undergraduate in Neuroscience (underway in 2016-17) Amanda Crotty -Undergraduate in Psychology (two projects: one in 2014 and one in 2011) Charles Morgan - Undergraduate in Psychology (2014) Nicholas Wiener - Undergraduate in Neuroscience (2014) Dennis Bird-Undergraduate in Neuroscience (2014) Melissa Loughlin- Undergraduate in Psychology (two projects: one in 2014 and one in 2015) Aaron Rapport-Undergraduate in Neuroscience (2012) Brittany Rhodes-Undergraduate in Neuroscience (2012) Rebecca Basile-Undergraduate in Neuroscience (2012) Adri Chantal Kopp-Undergraduate in Psychology (2012) Jesse Leinwand – Undergraduate in Psychology (2011) Michael Brandon-Undergraduate in Psychology (2010) Kelly Andrews – Undergraduate in Psychology (2010)

# Summer Interns

Cassandra Wanna (Summer 2016) Undergraduate at Middlebury College Rembrandt Otto-Meyer (Summer 2016) Undergraduate from the University of Chicago

Ashley Dillon (Summer 2014) Summer Neuroscience Undergraduate Research Fellow

# Previous mentoring

Summer 2003 "Forebrain" summer project sponsored by The Center for Behavioral Neuroscience: Alexis Hammond, Spelman College

Summer 2005 "Brain" summer program sponsored by The Center for Behavioral Neuroscience: Jonathon Diggs, Morehouse College

Summer 2005 Institute on neuroscience summer program for high school students: Lauren Daniel

Summer 2006 Institute on neuroscience summer program for high school students: William Bruns

Summer 2007 Institute on neuroscience summer program for high school students:

### Ashlee Wimberley & Siddharth Tantia

### **INVITED COLLOQUIA**

- 1. Noradrenergic differences in the modulation of the acoustic startle reflex in female rats. Douglas Hospital Research Center Research Day, March 1998. Montreal, Quebec.
- 2. Hormones and emotional behavior in the female rat. Center for Behavioral Neuroscience Annual Retreat, Feb, 2002. Atlanta, GA.
- 3. Stress hyporesponsiveness during lactation: pituitary mechanisms. Center for Behavioral Neuroscience Spring Symposium: The Maternal Brain. April, 2002, Atlanta, GA.
- 4. Hormones and emotional behavior in the female rat as assessed by the acoustic startle paradigm. Emory and Wake Forest Symposium on Estrogen and Behavior, August, 2002. Emory University, Atlanta, GA.
- 5. Hormones and emotional behavior in the female rat as assessed by the acoustic startle paradigm continued. Emory and Wake Forest Symposium on Estrogen and Behavior, March, 2003. University of North Carolina at Wake Forest. Wake Forest, N.C.
- 6. Gender differences in anxiety: light-enhanced startle in the rat. "Sex and Drugs" Conference sponsored by Pharmacology Biochemistry and Behavior. January, 2004. Morzine, France.
- 7. The role of gender and estrogen in emotional learning. Psychology Department Seminar. Colby College Maine. April 2008.
- 8. The role of gender and estrogen in emotional learning. 5th International Congress of Neuroendocrinology, September, 2008. Bristol, UK.
- 9. The Role of gender, estrogen and serotonin in the inhibition of fear. Friday Afternoon Colloquium for the Department of Anatomy and Neurobiology, School of Medicine, UVM, April, 2009.
- 10. Gender differences and the brain. Newport/Derby/Stanstead Osher Lifelong Learning Institute, Newport, Vermont. May, 2009.
- 11. The role of gender, estrogen and serotonin in the inhibition of fear. Biology Department, UVM, Spring Colloquium Series, February, 2010.
- 12. Gender differences and serotonin effects on emotion in the rat. Neuroscience and Behavior Spring Seminar Series, UMass, Amherst MA, April, 2010.

- 13. Estrogen and the serotonin 6 receptor modulate the expression of conditioned inhibition of fear in rats. Invited Symposim for the Annual Conference of the Eastern Psychological Association, New York, New York, March, 2013.
- 14. Social subordination disrupts estrogen's effects on behavior and physiology in female Rhesus monkeys. Invited talk for the International Workshop in Neuroendocrinology. Dorado, Brazil, August 2013.
- 15. Social stress modulates the effect of estrogen in female rhesus monkeys. Invited talk for the Center for Studies in Behavioral Neuroendocrinology Fall Colloquium, September 18<sup>th</sup> & 19<sup>th</sup>, 2014
- 16. Social subordination disrupts estrogen's effects in female Rhesus monkeys. Invited Colloquium at the Douglas Research Center , March 31<sup>st</sup>, 2014.
- 17. Social subordination disrupts estrogen's effects in female Rhesus monkeys. Invited Colloquium, Department of Neuroscience, Carlton University, April 4<sup>th</sup>, 2014.