

**Derek A. Hamilton**

**VITA**

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## **Educational History**

- B.A. 1996. The University of North Carolina at Charlotte. Psychology.
- M.S. 1998. The University of New Mexico. Psychology.  
Thesis title: Categorical picture-word interference for vocal and manual production  
Tasks: Evidence against the dual-coding and name retrieval hypotheses  
Thesis advisor: Paul C. Amrhein, Ph.D.
- Ph.D. 2003. The University of New Mexico. Psychology.  
Dissertation title: A behavioral and comparative analysis of human place learning in a virtual Morris water task.  
Dissertation advisors: Robert J. Sutherland, Ph.D. and Michael J. Dougher, Ph.D.
- Postdoctoral fellow. 2003-4. Canadian Centre for Behavioural Neuroscience.  
Advisor: Bryan Kolb, Ph.D.

## **Employment History**

### **Current Positions**

- 2004-5 Visiting Assistant Professor of Psychology and Neurosciences  
The University of New Mexico, Albuquerque, NM 87131
- **2005-Present**  
Professor, Department of Psychology  
secondary appointment Department of Neurosciences (UNM School of Medicine)  
The University of New Mexico, Albuquerque, NM 87131

2010-2016 Associate Professor

2005-2010 Assistant Professor

2011-2017 Area Head: *Cognition, Brain and Behavior Area.*

2018 Acting Chair, Department of Psychology

2019-2020 Assistant Vice President for Research, University of New Mexico Main Campus

**2020-Present Chairperson, Department of Psychology**

## **Membership in Professional Societies and Organizations**

- Research Society on Alcoholism (RSA)
- Fetal Alcohol Spectrum Disorder Study Group (FASDSG)
- Society for Neuroscience

## **Professional Recognition, Honors, and Awards**

- Arts and Sciences Award for Teaching Excellence, 2009-2010. The University of New Mexico
- 15th annual Benjamin Franklin Haught Memorial Lecture Award, 2003.  
Department of Psychology, The University of New Mexico
- Postdoctoral fellowship, 2003-4. Alberta Heritage Foundation for Medical Research  
\$35,000 annual stipend and \$3,000 research allowance for 2 years.
- Outstanding New Investigator, 2003. Fetal Alcohol Syndrome Study Group
- Outstanding Senior in Psychology, University of North Carolina at Charlotte, 1996.

## **RESEARCH, TEACHING, AND SERVICE INTERESTS**

My research interests include two major topics: 1) the behavioral and neurobiological consequences of moderate prenatal alcohol exposure (PAE), and 2) the basic behavioral and neurobiological processes involved in mammalian spatial navigation. I utilize a range of structural, electrophysiological, and immediate early gene expression techniques to address basic questions regarding the effects of PAE on neural plasticity, brain function, and behavior. Current work is focused on the consequences of moderate PAE on synaptic plasticity and glutamatergic signaling with an emphasis on frontal cortex circuitry underlying important behavioral consequences of PAE, including behavioral flexibility, spatial learning and memory, and social interaction. A second ongoing line of research in my laboratory is aimed at better understanding the basic behavioral and cognitive processes involved in common laboratory tests of spatial learning and memory, including the Morris water task for rodents and the virtual Morris water task for humans, with the goal of advancing understanding of brain-behavior relationships in these and related tasks that are commonly used to study relationships between neural and behavioral/cognitive processes.

My teaching interests include courses at the undergraduate and graduate levels on the neurobiology of behavior and fundamental processes involved in learning/memory, and the effects of drugs on brain plasticity and behavior. I am also closely involved in teaching and mentoring of students enrolled in the Psychology Honors program. Helping undergraduate students, graduate students, and postdoctoral fellows to become effective, independent researchers and advance to the next stage of their training or career is major goal of my mentoring efforts.

My service interests include contributing broadly to the University's educational and research missions. At present I serve as the Chairperson of the Department of Psychology which serves ~1500 undergraduate majors, ~70 doctoral students, and is the academic home of 31 faculty. The Department's graduate program includes a Clinical Doctoral program dually accredited by APA and PCSAS, and three degree programs broadly in the area of experimental psychology, including Cognition, Brain and Behavior, Evolutionary Psychology, and Diversity and Health Data Science Across the Lifespan. I previously served as the Assistant Vice President for Research on UNM's Main Campus, where I provided oversight of research centers and bureaus and interface with external corporate research partners. I Chaired the Institutional Animal Care and Use Committee from 2013-2018, which ensures compliance with federal law and regulations for research at UNM involving non-human animal species. I served as Chair for the Cognition, Brain, and Behavior (CBB) Area in the Department of Psychology from 2011-2017 and served as Acting Chair of Psychology in 2018. I also contribute broadly to the field by serving as a member on a National Institutes of Health grant review panel at the National Institute on Alcohol Abuse and Alcoholism, and recently completed a term as President for the Fetal Alcohol Spectrum Disorders Study Group, an international organization of scientists, providers, and students focused on better understanding the damaging effects of alcohol on the developing nervous system and pursuing treatment strategies.

## **CITATION METRICS AND PUBLICATION LISTS**

*Retrieved on the revision date of this c.v.*

h = 38, Total Citations 4,933 (Source, ISI web of knowledge; <http://www.researcherid.com/rid/H-4447-2013>)

h = 45, i10 = 80, Total Citations 8,484 (Source, Google Scholar)

Google Scholar : <https://scholar.google.com/citations?user=j-VpHzYAAAAJ&hl=en>

ResearchGate : [http://www.researchgate.net/profile/Derek\\_Hamilton](http://www.researchgate.net/profile/Derek_Hamilton)

NCBI : <http://www.ncbi.nlm.nih.gov/sites/myncbi/derek.hamilton.1/bibliography/40329263/public/>

## MANUSCRIPTS IN REVIEW

Howell, B.A., & Hamilton, D.A. (in review). Shifting Moods and Minds: Single-Session HRV Biofeedback Improves Mood and Cognitive Flexibility. Submitted to *Applied Psychophysiology and Biofeedback*.

Rae, R. J., Hunter Alberhasky, J. M., Balliet, M., Bangasser, D. A., Belloy, M. E., Berry, A. S., Berteotti, C., Bow, H., Buckley, R., Caldwell, J. Z. K., Carpi, M., Clark, B. J., Ciampa, C. J., Conley, A. C., Dahl, M. J., Donaldson, Z. R., Ehrenberg, A. J., Einstein, G., Falgàs, N., Fenlon, H. A., Fitzhugh, M. C., Froemke, R. C., Gallay, C., **Hamilton, D. A.**, Hasan, Z., Jabeen, S., Jacobs, H. I. L., Kolling, L. J., Koops, E. A., Lenzoni, S., Ligouri, C., Manca, R., Marcinkiewicz, C. A., Omoluabi, T., Orsini, C. A., Pa, J., Pentkowski, N. S., Pereira, J. B., Ramos, R., Sargin, D., Satpati, A., Selles, M. C., Sindi, S., Son, G., Van Egroo, M., Yuan, Q., and Kelberman, M. A. (in review). Sex differences in neuromodulatory subcortical systems and implications for Alzheimer's disease. Submitted to *Alzheimer's & Dementia, Special Issue: Neuromodulatory Subcortical Systems in Alzheimer's Disease*. [Note: This is a multi-section paper. I co-wrote the section on the Histaminergic system with A. Satpati. Authors 2-46 are listed in alphabetical order.]

## JOURNAL ARTICLES [ \*graduate or undergraduate student first-authored paper. Includes Master's thesis and Doctoral dissertation studies published after graduation ]

\*101. Tuchman, F. R., Montgomery, L., Hallgren, K. A., Hoskisson, C., Linde, P., Mulholland, P., Peters, A., **Hamilton, D. A.**, Mendelson, J., & Witkiewitz, K. (2025). Predictors of self-stigma among individuals in a telehealth-based treatment program for alcohol use disorder. *Alcohol: Clinical and Experimental Research*, in press.

\*100. Gonçalves-Garcia, M., Segal, M.G., Sneider, J. T., Silveri, M. M., & **Hamilton, D. A.** (2025). Preference for Directional Responding in a Virtual Morris Water Task is Associated with Increased Precuneus Activation in Adolescent Humans. *Behavioural Brain Research*, in press. Published Online Oct 21, 2025. <https://doi.org/10.1016/j.bbr.2025.115885>

\*99. Candelaria-Cook, F.T., & **Hamilton, D.A.** (2025). Cannabinoid agonist, WIN 55,212-2, increases in vivo paired-pulse facilitation, long-term potentiation, and Arc expression in the dentate gyrus, *Brain Research*, in press. Published Online Sep 9, 2025. <https://doi.org/10.1016/j.brainres.2025.149937>

98. Sneider, J. T., Cohen-Gilbert, J. E., Oot, E. N., Seraikas, A.M., Schuttenberg, E.M., Stalman, A., **Hamilton, D. A.**, Harris, S.K., Sabolek, H., Kumar, P., Nickerson, L.D., & Silveri, M. M. (2025). Differential activation of brain networks during spatial memory performance in substance-naïve youth. *Alcohol, Clinical & Experimental Research*, in press. Published Online Sep 9, 2025. <https://doi.org/10.1111/acer.70155>

\*97. Gonçalves-Garcia, M., Davies, D., Savage, D. D. & **Hamilton, D. A.** (2024). The histamine H3 receptor inverse agonist SAR-152954 reverses deficits in long-term potentiation associated with moderate prenatal alcohol exposure. *Alcohol*, 118, 45-55.

\*96. Gonçalves-Garcia, M., Barto, D., Reyna, N., Clark, B. J. & **Hamilton, D. A.** (2024). The prominence of action sequences and behavioral similarity in the Morris water task. *Perspectives on Behavior Science*, 47, 449-470

\*95. Dunn, B. R., Olguin, S. L., Davies, S., Pavlik, N. G., Brigman, J. L., **Hamilton, D.**, Savage, D. D., Maxwell, J. R. (2024) Sex-specific alterations in cognitive control following moderate prenatal alcohol exposure and transient systemic hypoxia ischemia in the rat. *Alcohol, Clinical & Experimental Research*. DOI: 10.1111/acer.15276. PMID: 38302722.

- \*94. Gonçalves-Garcia, M. & **Hamilton, D. A.** (2024). Unraveling the complex relationship between prenatal ethanol exposure, hippocampal LTP, and learning and memory. *Frontiers in Molecular Neuroscience*, 16. <http://doi.org/10.3389/fnmol.2023.1326089>
- \*93. Reyna, N. C., Clark, B. J., **Hamilton, D. A.**, & Pentkowski, N. S. (2023). Anxiety and Alzheimer's disease pathogenesis: focus on 5-HT and CRF systems in 3xTg-AD and TgF344-AD animal models [Review]. *Frontiers in Aging Neuroscience*, 15. <https://doi.org/10.3389/fnagi.2023.1251075>
92. Fink, B. C., Claus, E. D., Cavanagh, J. F., **Hamilton, D. A.**, & Biesen, J. N. (2023). Heart rate variability may index emotion dysregulation in alcohol-related intimate partner violence. *Frontiers in psychiatry*, 14. doi:10.3389/fpsyt.2023.1017306
- \*91. Howell, B.A., & **Hamilton, D.A.** (2022). Baseline heart rate variability (HRV) and performance during a set-shifting visuospatial learning task: The moderating effect of trait negative affectivity (NA) on behavioral flexibility. *Physiology & Behavior* 243, 113647
90. Silveri, M. M., Sneider, J. T., Cohen-Gilbert, J. E., Oot, E. N., Seraikas, A.M., Schuttenberg, E.M., **Hamilton, D. A.**, Sabolek, H., Harris, S.K., & Nickerson, L.D. (2022). Perceived stress and rejection associated with functional network strength during memory retrieval in adolescents. *Cognitive Neuroscience*, 2, 99-112.
- \*89. Rodriguez, C.I., Vergara, V.M., Calhoun, V.D., Savage, D.D., **Hamilton, D.A.**, Tesche, C.D., & Stephen, J.M. (2021). Disruptions in global network segregation and integration in adolescents and young adults with fetal alcohol spectrum disorder. *Alcoholism : Clinical and Experimental Research*, 45, 1775-1789.
- \*88. Rodriguez, C.I., Vergara, V.M., Davies, S., Calhoun, V.D., Savage, D.D., & **Hamilton, D.A.** (2021). Detection of prenatal alcohol exposure using machine learning classification of resting-state functional network connectivity data. *Alcohol* 93, 25-34.
- \*87. Howell, B.A., & **Hamilton, D.A.** (2021). Trait affective differences influence behavioral flexibility in virtual spatial and non-spatial discrimination tasks. *Personality and Individual Differences*, 270, 110424.
86. Sneider, J. T., Cohen-Gilbert, J. E., **Hamilton, D. A.**, Seraikas, A.M., Oot, E. N., Schuttenberg, E.M., Nickerson, L.D., & Silveri, M. M. (2020). Brain Activation during Memory Retrieval is Associated with Depression Severity in Women. *Psychiatry Research : Neuroimaging*, 307, 111204.
- \*85. Harvey, R.E., Berkowitz, L.E., Savage, D.D., **Hamilton, D.A.**, & Clark, B.J. (2020). Altered hippocampal place cell representation and theta rhythmicity following moderate prenatal alcohol exposure. *Current Biology*, 30, 3556-3569.e5
84. Mole, J.P., Fasano, F., Evans, J., Sims, R., **Hamilton, D.A.**, Kidd, E., Metzler-Baddeley, C. (2020) Genetic risk of dementia modifies obesity effects on white matter myelin in cognitively healthy adults, *Neurobiology of Aging*, 94, 298-310.
- \*83. Madden, J. T., Thompson, S. M., Magcalas, C. M., Wagner, J. L., **Hamilton, D. A.**, Savage, D. D., . . . Pentkowski, N. S. (2020). Moderate prenatal alcohol exposure reduces parvalbumin expressing GABAergic interneurons in the dorsal hippocampus of adult male and female rat offspring. *Neuroscience Letters*, 718, 134700. [doi:https://doi.org/10.1016/j.neulet.2019.134700](https://doi.org/10.1016/j.neulet.2019.134700)
82. **Hamilton, D.A.**, Mooney, S.M., Petrenko, C.L.M., & Hamre, K.M. (2020). Proceedings of the 2019 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. *Alcohol*, 86, 25-33.

81. Fink, B.C., Howell, B.C., Cavanagh, J.F., **Hamilton, D.A.**, Claus, E.D., & Frost, M.E. (2019) Frontal Alpha Asymmetry in Alcohol-Related Intimate Partner Violence. *Social, Cognitive and Affective Neuroscience*, 11, 1209-1217. <https://doi.org/10.1093/scan/nsz101>
80. **Hamilton, D.A.**, Silasi, G., Magcalas, C.M., Pellis, S.M., & Kolb, B.E. (2020). Social and olfactory experiences modify neuronal morphology of orbital frontal cortex. *Behavioral Neuroscience*, 134, 59-68.
- \*79. Harvey, R.E., Berkowitz, L.E., **Hamilton, D.A.**, & Clark, B.J. (2019). The Effects of Developmental Alcohol Exposure on the Neurobiology of Spatial Processing. *Neuroscience & Biobehavioral Reviews*, 107:775-794.
78. Klintsova, A., **Hamilton, D.A.**, Mooney, S., & Petrenko, C. (2019). Proceedings of the 2018 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. *Alcohol*, 81, 47-55.
- \*77. Frost, M.E., Peterson, V.L., Bird, C. W., McCool, B.A., & **Hamilton, D. A.** (2019). Effects of Ethanol Exposure and Withdrawal on Neuronal Morphology in the Agranular Insular and Prelimbic Cortices: Relationship to Withdrawal-Related Structural Plasticity in the Nucleus Accumbens. *Brain Sciences*, 9, 180. [doi:https://doi.org/10.3390/brainsci9080180](https://doi.org/10.3390/brainsci9080180)
- \*76. Sanchez, L. M., Goss, J., Wagner, J., Davies, S., Savage, D. D., **Hamilton, D. A.**, & Clark, B. J. (2019). Moderate prenatal alcohol exposure impairs performance by adult male rats in an object-place paired-associate task. *Behavioural Brain Research*, 360, 228-234. doi:10.1016/j.bbr.2018.12.014
75. Lewine, J.D., Weber, W., Gigliotti, A., McDonald, J.D., Doyle-Eisele, M., Banger, N., Paulson, K., Magcalas, C., **Hamilton, D.A.**, Garcia, E., Rauli, R., & Laney, J. (2018). Addition of ketamine to standard-of-care countermeasures for acute organophosphate poisoning improves neurobiological outcomes. *Neurotoxicology*, 69, 37-46.
74. Sneider, J. T., Cohen-Gilbert, J. E., **Hamilton, D. A.**, Stein, E. R., Golan, N., Oot, E. N., . . . Silveri, M. M. (2018). Adolescent Hippocampal and Prefrontal Brain Activation During Performance of the Virtual Morris Water Task. *Frontiers in Human Neuroscience*, 12(238). doi:10.3389/fnhum.2018.00238
73. Wozniak, J., Klintsova, A., **Hamilton, D.**, & Mooney, S. (2018). Proceedings of the 2017 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. *Alcohol*, 69, 7-14.
72. Miller, M. G., **Hamilton, D. A.**, Joseph, J. A., & Shukitt-Hale, B. (2018). Dietary blueberry improves cognition among older adults in a randomized, double-blind, placebo-controlled trial. *European Journal of Nutrition*, 57, 1169-1180.
- \*71. Donaldson, T. N., Barto, D., Bird, C. W., Magcalas, C. M., Rodriguez, C. I., Fink, B. C., & **Hamilton, D. A.** (2018). Social order: Using the sequential structure of social interaction to discriminate abnormal social behavior in the rat. *Learning and Motivation*, 61, 41-51.
70. Ceccanti, M., Coriale, G., **Hamilton, D.**, Carito, V., Coccurello, R., Scalese, B., Ciafre, S., Codazzo, C., Messina, M. P., Chaldakov, G.; Fiore, M. (2017). Virtual Morris Task Responses in Individuals in an Abstinence Phase from Alcohol. *Canadian Journal of Physiology and Pharmacology*, 96, 128-136.
69. Medina, A., Wozniak, J., Klintsova, A., & **Hamilton, D.** (2017). Proceedings of the 2016 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. *Alcohol*, 65, 19-24.
- \*68. Barto, D., Bird, C.W., **Hamilton, D.A.**, & Fink, B.C. (2017). The Simple Video Coder: A free tool for efficiently coding social video data. *Behavior Research Methods*, 49, 1563-1568. PMID: 27503301, PMCID: PMC5298951.
67. Bird, C. W., Barto, D., Magcalas, C. M., Rodriguez, C. I., Donaldson, T., Davies, S., . . . **Hamilton, D. A.** (2017). Ifenprodil infusion in agranular insular cortex alters social behavior and vocalizations in rats exposed to moderate levels of ethanol during prenatal development. *Behavioural Brain Research*, 320, 1-11. PMID: 27888019, PMCID: PMC5239726.

- \*66. Rodriguez, C. I., Davies, S., Calhoun, V., Savage, D.D., & **Hamilton, D. A.** (2016). Moderate prenatal ethanol exposure alters functional connectivity in the adult rat brain. *Alcoholism: Clinical and Experimental Research*, 40, 2134-2146. PMID: 27570053, PMCID: PMC5048527.
- \*65. Rodriguez, C. I., Magcalas, C. M., Barto, D., Fink, B. C., Rice, J. P., Bird, C. W., Davies, S., Pentkowski, N.S., Savage, D.D., & **Hamilton, D. A.** (2016). Effects of sex and housing on social, spatial, and motor behavior in adult rats exposed to moderate levels of alcohol during prenatal development. *Behavioural Brain Research*, 313, 233-243. PMID: 27424779, PMCID: PMC4987176
64. Kremmyda, O., Huefner, K., Flanagan, V. L., **Hamilton, D. A.**, Linn, J., Strupp, M., . . . Brandt, T. (2016). Beyond Dizziness: Virtual Navigation, Spatial Anxiety and Hippocampal Volume in Bilateral Vestibulopathy. *Frontiers in Human Neuroscience*, 10. doi:10.3389/fnhum.2016.00139. PMID: 27065838, PMCID: PMC4814552
63. Ceccanti, M., **Hamilton, D.**, Coriale, G., Carito, V., Aloe, L., Chaldakov, G., . . . Fiore, M. (2015). Spatial learning in men undergoing alcohol detoxification. *Physiology & Behavior*, 149, 324-330. doi:10.1016/j.physbeh.2015.06.034. PMID: 26143187.
- \*62. Rice, J.P., Wallace, D.G., & **Hamilton, D.A.** (2015). Lesions of the hippocampus or dorsolateral striatum disrupt distinct aspects of spatial navigation strategies based on proximal and distal information in a cued variant of the Morris water task. *Behavioural Brain Research*, 289, 105-117. PMID: 25907746, PMCID: PMC4441542.
61. Bird, C.W., Candelaria-Cook, F.T., Magcalas, C.M., Davies, S., Valenzuela, C.F., Savage, D.D., & **Hamilton, D.A.** (2015). Moderate prenatal alcohol exposure enhances GluN2B containing NMDA receptor binding and ifenprodil sensitivity in rat ventrolateral frontal cortex. *PLoS ONE*, 10(3):e0118721. PMID: 25747876, PMCID: PMC4351952.
60. **Hamilton, D.A.**, & Brigman, J.L. (2015). Behavioral flexibility in rats and mice: Contributions of distinct frontocortical regions. *Genes, Brain, and Behavior*, 14, 4-20. PMID: 25561028, PMCID: PMC4482359.
59. Tropp-Sneider, J., **Hamilton, D.A.**, Cohen-Gilbert, J.E., Crowley, D.J., Rosso, I.M., & Silveri, M.M. (2015). Sex differences in spatial navigation and perception in human adolescents and emerging adults. *Behavioural Processes*, 111, 42-50. PMID: 25464337, PMCID: PMC4304985.
- \*58. Peterson, V.L., McCool, B.A., & **Hamilton, D.A.** (2015). Effects of ethanol exposure and withdrawal on dendritic morphology and spine density in the nucleus accumbens core and shell. *Brain Research*, 1594, 125-135. PMID: 25452024, PMCID: PMC4267557.
57. **Hamilton, D.A.**, Magcalas, C.M., Barto, D., Bird, C.W., Rodriguez, C.I., Fink, B.C., Pellis, S.M., Davies, S., & Savage, D.D. (2014). Moderate prenatal alcohol exposure and quantification of social behavior in adult rats. *Journal of Visualized Experiments*, 94, e52407, doi:10.3791/52407. PMID: 25549080, PMCID: PMC4396951.
56. Miller, M.G., **Hamilton, D.A.**, Joseph, J.A., Shukitt-Hale, B. (2014). Mobility and cognition: End-points for dietary interventions in aging. *Nutrition and Aging*, 2, 213-222.
55. Varaschin, R.K., Rosenberg, M.J., **Hamilton, D.A.**, & Savage, D.D. (2014). Differential effects of the histamine H<sub>3</sub> receptor agonist methimepip on dentate granule cell excitability, paired-pulse plasticity and long-term potentiation in prenatal alcohol-exposed rats. *Alcoholism: Clinical and Experimental Research*, 38, 1902-1911. PMID: 24818819, PMCID: PMC5094461.
- \*54. Akers, K.G., & **Hamilton, D.A.** (2014). Effect of high-frequency stimulation of the perforant path on a previously acquired spatial memory: Influence of memory strength and reactivation. *PLoS ONE*, 9, e100766. PMID: 24971994, PMCID: PMC4074056.
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- \***51. Candelaria-Cook, F.T., & Hamilton, D.A.** (2014). Chronic cannabinoid agonist (WIN 55,212-2) exposure alters hippocampal dentate gyrus spine density in adult rats, *Brain Research*, *1542*, 104-110. PMCID: PMC3883362.
- 50. Wiener-Vacher, S.R., Hamilton, D.A., & Wiener, S.I.** (2013). Vestibular activity and cognitive development in children: Perspectives. *Frontiers in Integrative Neuroscience*, *7*, 1-13. doi: 10.3389/fnint.2013.00092. PMID: 24376403, PMCID: PMC3858645.
- 49. Clark, B.J., Rice, J.P., Akers, K.G., Candelaria-Cook, F.T., Taube, J.S., & Hamilton, D.A.** (2013). Lesions of the dorsal tegmental nuclei impair performance in cued, place, and directional variants of the Morris water task. *Behavioral Neuroscience*, *127*, 566-581. PMID: 23731069, PMCID: PMC3997071.
- 48. Köppen, J.R., Winter, S.S., Loda, E.L., Apger, B.P., Grimelli, D., Hamilton, D.A., & Wallace, D.G.** (2012). Analysis of movement kinematics on analogous spatial learning tasks demonstrates conservation of direction and distance estimation across humans (*Homo sapiens*) and rats (*Rattus norvegicus*). *Journal of Comparative Psychology*, *127*, 179-193. PMID: 2308864.
- 47. Redhead, E.S., Hamilton, D.A., Parker, M.O., Chan, W., & Allison, C.** (2013) Evidence that modifying salience of geometric and landmark cues influences which controls navigation. *Learning and Behavior*, *41*, 179-191. PMID: 23180188.
- 46. Abbott, C.C., Jaramillo, A., Wilcox, C.E., & Hamilton, D.A.** (2013). Antipsychotic drug effects in schizophrenia: a review of longitudinal fMRI investigations and neural interpretations. *Current Medicinal Chemistry*, *20*, 428-437. PMID: 23157635, PMCID: PMC3632416.
- 45. Hanlon, F.M., Houck, J.M., Kilmaj, S.D., Caprihan, A., Mayer, A., Weisend, M.P., Bustillo, J., Hamilton, D.A., & Tesche, C.D.** (2012). Fronto-temporal Anatomical Connectivity and Working-Relational Memory Performance Predict Everyday Functioning in Schizophrenia. *Psychophysiology*, *49*, 1340-1352. PMID: 22882287, PMCID: PMC4077350.
- 44. Wray, A.M., Dougher, M.J., Hamilton, D.A., & Guinther, P.** (2012). Examining the Reinforcing Properties of Making Sense: A Preliminary Study. *Psychological Record*, *62*, 599-622.
- 43. Barkas, L.J., Redhead, E.S., Taylor, M., Shtaya, A., Hamilton, D.A., & Gray, W.P.** (2012). Fluoxetine restores spatial learning but not accelerated forgetting in mesial temporal lobe epilepsy. *Brain*, *135*, 2358-2374. PMID: 22843410.
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- 41. Murty, V.P., LaBar, K.S., Hamilton, D.A., & Adcock, R.A.** (2011). Is all motivation good for learning? Dissociable influences of approach and avoidance motivation in declarative memory. *Learning and Memory*, *18*, 712-717.
- 40. Knierim, J.J., & Hamilton, D.A.** (2011). Framing spatial cognition: Neural representations of proximal and distal reference frames and their role in navigation. *Physiological Reviews*, *91*, 1245-1279.
- 39. Hübner, K., Binetti, C., Hamilton, D.A., Stephan, T., Flanagin, V.L., Linn, J., Labudda, K., Markowitsch, H., Glasauer, S., Jahn, K., Strupp, M., & Brandt, T.** (2011) Structural and functional plasticity of the hippocampal formation in professional dancers and slackliners. *Hippocampus*, *8*, 855-865.
- \***38. Akers, K.G., Candelaria-Cook, F.T., Rice, J.P., Johnson, T.E. & Hamilton, D.A.** (2011). Cued platform training reveals early development of directional responding among preweanling rats in the Morris water task. *Developmental Psychobiology*, *53*, 1-12.

37. Savage, D.D., Rosenberg, M.J., Wolff, C.R., Akers, K.G., El-Emawy, A., Staples, M.C., Varaschin, R.K., Wright, C.A., Seidel, J.L., Caldwell, K.K., & **Hamilton, D.A.** (2010). Effects of a Novel Cognition-Enhancing Agent On Fetal Ethanol-Induced Learning Deficits. *Alcoholism: Clinical and Experimental Research*, 34, 1793-1802.
36. **Hamilton, D.A.**, Candelaria-Cook, F.T., Akers, K.G., Rice, J.P., Maes, L.I., Rosenberg, M., Valenzuela, C.F., & Savage, D.D. (2010). Patterns of social-experience-related *c-fos* and *Arc* expression in the frontal cortices of rats exposed to saccharin or moderate levels of ethanol during prenatal brain development. *Behavioural Brain Research*, 214, 66-74.
35. Varaschin, R. K., Rosenberg, M.J., Akers, K.G., **Hamilton, D.A.**, & Savage, D.D. (2010). Effects of the Cognition-Enhancing Agent ABT-239 on Fetal Ethanol-induced Deficits in Dentate Gyrus Synaptic Plasticity. *Journal of Pharmacology and Experimental Therapeutics*, 334, 191-198.
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33. **Hamilton, D.A.**, Akers, K.G., Rice, J.P., Johnson, T.E., Candelaria-Cook, F.T., Maes, L.I., Rosenberg, M., Valenzuela, C.F., & Savage, D.D. (2010). Prenatal exposure to moderate levels of ethanol alters social behavior in adult rats: Relationship to structural plasticity and immediate early gene expression in frontal cortex. *Behavioural Brain Research*, 207, 290-304.
32. Hübner, K., Stephan, T., **Hamilton, D.A.**, Kalla, R., Glasauer, S., Strupp, M., & Brandt, T. (2009). Gray matter atrophy after chronic complete unilateral vestibular deafferentation. *Annals of the New York Academy of Sciences*, 1164, 383-385.
31. **Hamilton, D.A.**, Johnson, T.E., Redhead, E.S., & Verney, S.P. (2009). Control of human and rodent navigation by room and apparatus cues. *Behavioural Processes*, 81, 154-169.
30. **Hamilton, D.A.**, Akers, K.G., Johnson, T.E., Rice, J.P., Candelaria, F.T., & Redhead, E.S. (2009). Evidence for a shift from place navigation to directional responding in one variant of the Morris water task. *Journal of Experimental Psychology: Animal Behavior Processes*, 35, 271-278.
- \*29. Akers, K.G., Candelaria, F.T., Rice, J.P., Johnson, T.E., & **Hamilton, D.A.** (2009). Delayed development of place navigation compared to directional responding in preweanling rats. *Behavioral Neuroscience*, 123, 267-275.
28. Redhead, E.S., & **Hamilton, D.A.** (2009). Evidence of blocking with geometric cues in a virtual watermaze. *Learning and Motivation*, 40, 15-34.
27. Silasi, G., **Hamilton, D.A.**, & Kolb, B. (2008). Social instability blocks functional restitution following motor cortex stroke in rats. *Behavioural Brain Research*, 188, 219-226.
26. **Hamilton, D.A.**, Akers, K.G., Johnson, T.E., Rice, J.P., Candelaria, F.T., Sutherland, R.J., Weisend, M.P., & Redhead, E.S. (2008). The relative influence of place and direction in the Morris water task. *Journal of Experimental Psychology: Animal Behavior Processes*, 34, 31-53.
- \*25. Akers, K.G., Candelaria, F.T., & **Hamilton, D.A.** (2007). Prewanling rats solve the Morris water task via directional navigation. *Behavioral Neuroscience*, 121, 1426-1430.
- \*24. Akers, K.G., & **Hamilton, D.A.** (2007). Comparison of the developmental trajectories of place and cued navigation in the Morris water task. *Developmental Psychobiology*, 49, 553-564.
23. Dougher, M.J., **Hamilton, D.A.**, Fink, B.C., & Harrington, J. (2007). Transformation of the discriminative and eliciting functions of generalized relational stimuli. *Journal of the Experimental Analysis of Behavior*, 88, 179-197.
22. Redhead, E.S., & **Hamilton, D.A.** (2007). Interaction between locale and taxon strategies in human spatial learning. *Learning and Motivation*, 38, 262-283.
21. Hübner, K., **Hamilton, D.A.**, Kalla, R., Stephan, T., Brüning, R., Ma, J., Markowitsch, H.J., Labudda, K. Schichor, C., Strupp, M., & Brandt, T. (2007). Spatial memory and hippocampal volume in humans with unilateral vestibular deafferentation. *Hippocampus*, 17, 471-485.

- 20. Hamilton, D.A.,** Akers, K.G., Weisend, M.P., & Sutherland, R.J. (2007). How do room and apparatus cues control navigation in the Morris water task?: Evidence for distinct contributions to a movement vector. *Journal of Experimental Psychology: Animal Behavior Processes*, *33*, 100-114.
- 19. Hanlon, F.M.,** Weisend, M.P., **Hamilton, D.A.,** Jones, A., Thoma, R.J., Huang, M-X., Martin, K., Yeo, R.A., Miller, G.A., & Cañive, J.M. (2006). Impairment on the hippocampal-dependent virtual Morris water task in schizophrenia. *Schizophrenia Research*, *87*, 67-80.
- 18. Wallace, D.G., Hamilton, D.A.,** & Wishaw, I.Q. (2006). Topographic and kinematic characteristics of movement support a role for dead reckoning in organizing exploratory behavior. *Animal Cognition*, *9*, 219-228.
- 17. Clark, B.J., Hamilton, D.A.,** & Wishaw, I.Q. (2006). Motor Activity (exploration) and formation of home bases in mice (C57BL/6) influenced by visual and tactile cues: modification of movement geometry, distance, location, and speed. *Physiology & Behavior*, *87*, 805-816.
- 16. Brandt, T. Schautzer, F., Hamilton, D.A.,** Brüning, R., Markowitsch, H.J., Kalla, R., Darlington, C., Smith, P., & Strupp, M. (2005). Vestibular loss causes hippocampal atrophy and impaired spatial memory in humans. *Brain*, *128*, 2732-2741.
- 15. Clark, B.J., Hines, D.J., Hamilton, D.A.,** & Wishaw, I.Q. (2005). Organized exploratory movements are intact in rats with hippocampal lesions. *Behavioural Brain Research*, *163*, 91-99.
- 14. Driscoll, I., Hamilton, D.A.,** Yeo, R.A., Brooks, W.M., & Sutherland, R.J. (2005). Virtual navigation in humans: The impact of age, sex, and hormones on place learning. *Hormones and Behavior*, *47*, 326-335.
- 13. Hamilton, D.A.,** & Kolb, B. (2005). Differential effects of nicotine and complex housing on subsequent experience-dependent structural plasticity in the nucleus accumbens. *Behavioral Neuroscience*, *119*, 355-365.
- 12. Sutherland, R.J., & Hamilton, D.A.** (2004). Rodent spatial navigation: At the crossroads of cognition and movement. *Neuroscience & Biobehavioral Reviews*, *28*, 687-697.
- 11. Villarreal, G. Hamilton, D.A.,** Graham, D.P., Driscoll, I., Qualls, C., Petropoulos, H., & Brooks, W.M. (2004). Reduced area of the corpus callosum in PTSD. *Psychiatry Research*, *131*, 227-235.
- 10. Hamilton, D.A.,** Rosenfelt, C.S., & Wishaw, I.Q. (2004). Sequential control of navigation by locale and taxon cues in the Morris water task. *Behavioural Brain Research*, *154*, 385-397.
- 9. Schautzer, F., Hamilton, D.,** Kalla, R., Strupp, M., & Brandt, T. (2003). Spatial learning deficits in patients with chronic bilateral vestibular failure. *Annals of the New York Academy of Sciences*, *1004*, 316-324.
- 8. Driscoll, I., Hamilton, D.A.,** Petropoulos, H., Yeo, R.A., Brooks, W.M., Baumgartner, R.N., & Sutherland, R.J. (2003). The aging hippocampus: Cognitive, structural, and biochemical findings. *Cerebral Cortex*, *13*, 1344-1351.
- 7. Hamilton, D.A.,** Kodituwakku, P.W., Sutherland, R.J., & Savage, D.D. (2003). Children with Fetal Alcohol Syndrome are impaired at place learning but not cued-navigation in a virtual Morris water task. *Behavioural Brain Research*, *143*, 85-94.
- 6. Villarreal, G.,** Petropoulos, H., **Hamilton, D.A.,** Rowland, L.M., Horan, W.P., Griego, J.A., Moreshead, M., Hart, B.L., & Brooks, W.M. (2002). Proton-MRS of the medial temporal lobes and occipital white matter in PTSD: Preliminary results. *Canadian Journal of Psychiatry*, *47*, 666-670.
- 5. Villarreal, G., Hamilton, D.A.,** Petropoulos, H., Driscoll, I., Rowland, L.M., Griego, J.A., Kodituwakku, P.W., Hart, B.L., Escalona, R., & Brooks, W.M. (2002). Reduced hippocampal volume and total white matter volume in PTSD. *Biological Psychiatry*, *52*, 119-125.
- 4. Hamilton, D.A.,** Driscoll, I., & Sutherland, R.J. (2002). Human place learning in a virtual Morris water task: Some important constraints on the flexibility of place navigation. *Behavioural Brain Research*, *129*, 159-170.
- 3. Sutherland, R.J.,** Weisend, M.P., Mumby, D., Astur, R.S., Hanlon, F.M., Koerner, A., Thomas, M.J., Wu, Y., Moses, S., Cole, C., **Hamilton, D.A.,** & Hoelsing, J.M. (2001). Retrograde amnesia after hippocampal damage: Recent vs. remote memories in two tasks. *Hippocampus*, *11*, 27-42.

2. Amrhein, P.C., Bond, J.K., & **Hamilton, D.A.** (1999). Locus of control and the age difference in free recall from episodic memory. *Journal of General Psychology*, 126, 146-161.

1. **Hamilton, D.A.**, & Sutherland, R.J. (1999). Blocking in human place learning: Evidence from virtual navigation. *Psychobiology*, 27, 453-461.

### **BOOK CHAPTERS AND ENCYCLOPEDIA ENTRIES**

4. Dougher, M.J., & **Hamilton, D.A.** (2018). The contextual science of learning : Integrating behavioral and evolution science within a functional approach. In *Evolution and Contextual Behavioral Science*. Ed. David Sloan Wilson and Steven C. Hayes. Context Press: Oakland, CA.

3. **Hamilton, D.A.**, & Barto, D. (2015). Navigation in Virtual Space: Psychological and Neural Aspects. *International Encyclopedia of Social and Behavioral Sciences*. Ed. James Wright. Elsevier Ltd.: Oxford, UK.

2. Strupp, M. Schautzer, F., **Hamilton, D.A.**, Brüning, R., Markowitsch, H.J., Kalla, R., Darlington, C., Smith, P., & Brandt, T. (2008) Chronische Bilaterale Vestibulopathie führt zu Störungen des räumlichen Gedächtnisses und einer beidseitigen Atrophie des Hippocampus. In: Scherer H. (eds) *Der Gleichgewichtssinn*. Springer, Vienna.

1. **Hamilton, D.A.**, Prusky, G.T., & Sutherland, R.J. (2006). The Morris water task and related methods. In *Tasks and Techniques: A sampling of methodologies for the investigation of animal learning, behavior, and cognition*, Ed. Matthew J. Anderson. Nova Science Publishers, Inc. ISBN 1-60021-126-7.

### **INVITED TALKS/LECTURES AND REFEREED PRESENTATIONS/ABSTRACTS**

17. **Hamilton, D.A.** & Savage, D.D. Prenatal Alcohol Exposure Elevates Histamine H3 Receptor-mediated Inhibition of Excitatory Neurotransmission in Brain Via Alterations in Sigma-1 Receptor Modulation of Histamine H3 Receptor Function. *Fetal Alcohol Spectrum Disorders United*. Seattle, Wa. March, 2025.

16. Action sequences and slips in spatial navigation. Society for the Quantitative Analysis of Behavior (SQAB). Denver, CO., May 25, 2023.

15. Moderate prenatal alcohol and behavioral flexibility. University of Arkansas Medical School, August 22, 2018.

14. The consequences of moderate prenatal ethanol exposure on spatial learning, memory, and cognition. Northern Illinois University. March 30, 2015.

13. The prefrontal consequences of moderate prenatal alcohol exposure. University of Nevada, Las Vegas (UNLV). September 7, 2014.

12. Fragmentation of local view spaces. Vespucci Workshop on Brain and Space. Champalimaud Centre for the Unknown, Lisbon, Portugal. Sept, 2014.

11. Framing the behavioral constituents of spatial navigation in rats and humans. Behaviour (joint meeting of the International ethological Congress and the Association for the Study of Animal Behaviour). Newcastle, UK. August 7, 2013.

10. Control of rat and human spatial navigation by room and apparatus reference frames. Hippocampal Spring Conference, Taormina, Sicily, Italy. June 9, 2013.

9. Framing the behavioral constituents of spatial navigation in rats and humans. College de France, Paris. June 6, 2013.

8. Framing spatial navigation in rats and humans. American Psychological Association, Orlando. FL. August 4, 2012.

7. Framing the behavioral and neurobiological constituents of spatial navigation. Arizona State University Tempe, AZ, Oct 12, 2011.

6. Framing the behavioral and neurobiological constituents of spatial navigation. Invited talk, 4<sup>th</sup> annual meeting of the Four Corner Association for Behavior Analysis, Santa Fe. NM, April 1, 2011.

5. The relative and relational features of stimulus control in human and rodent spatial navigation. Invited address at the annual meeting of the American Psychological Association, Divisions 25, 3, and 6, Boston, MA, August, 2008.
4. The relative influence of place and direction in human and rodent spatial navigation. Invited address at the Meeting of the Society for the Quantitative Analysis of Behavior (SQAB), Chicago, IL. May, 2008.
3. Jain, E., Healy, M. J., Saland, L., **Hamilton, D.**, Allan, A., Caldwell, K., & Caudell, T. P.. (2005-6). Hypergraphs: Organizing complex natural neural networks. IEEE Proceedings of the Third International Conference on Intelligent Sensing and Information Processing.
2. A combined structural and functional neuroimaging study in children with Fetal Alcohol Syndrome. Annual meeting of the Research Society on Alcoholism, Vancouver, BC, Canada. June, 2004
1. A multimodal neuroimaging study in children with Fetal Alcohol Syndrome. Annual meeting of the Fetal Alcohol Syndrome Study Group, Fort Lauderdale, FL. June, 2003.

## **RESEARCH FUNDING**

### **Active Funding:**

#### ***Past Funding:***

#### **Title : Neuroinflammation : Role in FASD cognitive deficits (PI : P Drew)**

Agency : NIAAA

Proposal # : 1R01AA026665-01A1

Funding Period : 9/2018 - 8/2024

1.2 Calendar

Role: Co-I (PI on UNM Subaward)

#### **Title: Fetal ethanol-induced behavioral deficits: Mechanisms, diagnosis and Intervention**

Agency: NIH/NIAAA

Proposal # ; 1P50AA022534-02

Funding Period : 08/2019 – 06/2024

PI : D.D. Savage

Role : Co-Investigator (Component 3)

#### **Title : Alcohol research training in neurosciences**

Agency : NIH/NIAAA

Proposal # : 2T32 AA014127

Funding Period : Aug 1, 2018 – July 31,2023

PI : C. Fernando Valenzuela, Ph.D.

Annual costs : \$118,504

Description : The main goal of the project is to train pre-doctoral students in neuroscience-related alcohol research.

Role: Mentor and Steering Committee Member

#### **Title: Impact of SAR152954 on prenatal alcohol exposure-induced neurobehavioral deficits.**

(PI : DD Savage)

Agency: NCATS

Proposal # : UH2 TR002082

Funding Period : 8/2017 - 7/2020

1.2 Calendar

Role: Co-I

#### **Title: Prenatal Alcohol Exposure and Neural Representations of Space**

Agency: NIH/NIAAA

Proposal # : R21 AA02498

Funding Period : 1/2017-1/2020

Total Direct Costs : \$275,000

Role: PI, co-PI Benjamin Clark

**Title: Over-arousal as a mechanism between alcohol and intimate partner violence (PI: BC Fink)**

Agency: NIH/NIAAA  
Proposal # : 1R21 AA22367-01A1  
Funding Period : 09/2015-08/2017  
Direct costs : \$275,000  
Role : Co-I

**Title: Fetal-ethanol-induced deficits in agranular insular cortex function**

Agency: NIH/NIAAA  
Proposal #: AA019462  
Funding Period: Mar 1, 2011 – February 28, 2016  
Total costs: \$1.17M  
Role: PI

**Title: Fetal Ethanol Effects on Histaminergic Regulation of Neurotransmission**

Agency: NIH/NIAAA  
Proposal #: 1R01AA19884-01A1  
Funding Period : 7/2011-6/2016  
PI: D.D. Savage, Ph.D.  
Total Costs : \$1.04M  
Role: Co-I

**Title: Prenatal ethanol exposure and neural representations of space**

Agency: NIH/NIAAA  
Proposal # ; 1P50AA022534-01  
Funding Period : 12/2014 – 05/2015  
Total Costs : \$27,500  
Role : Pilot project co-PI with B.J. Clark

**Title : Effects of chronic exposure to the atypical antipsychotic olanzapine on functional networks in the anesthetized rat brain**

Agency : NIH/NCRR  
Proposal #: P20RR021938  
Total Costs: \$25,000  
Funding Period : 4/2011-3/2012  
Role : PI on 2011-12 pilot project  
This is a pilot project for the Mind Research Network Schizophrenia COBRE (*Neural Mechanism of Schizophrenia*, PI : Bustillo)

**Title : Fetal alcohol induced behavioral deficits: Mechanisms, diagnosis and intervention (P20 Center Grant)**

Agency: NIH/NIAAA  
Proposal #: 1 P2 AA017068-01  
PI : Daniel Savage, Ph.D.  
Funding Period: July 1, 2008 – June 30, 2013.  
Role: Co-investigator on project #4, "Effects of novel cognition enhancing agents on fetal alcohol induced behavioral deficits."

**Title : Screening putative therapeutic agents for fetal-alcohol-induced learning deficits**

Agency : NIH/NIAAA  
Proposal #: 1 R21 AA016619  
Funding Period : Mar 31, 2007 – Mar 30, 2010  
Direct costs: \$275,000  
PI : Daniel Savage, Ph.D.

Role: Co-PI

**Title : Prenatal ethanol, social behavior, and prefrontal cortex**

Agency : NIH/NIAAA

Proposal #: 1 R21 AA015356-01A2

Funding Period : Mar 31, 2006 – Mar 30, 2009

Direct costs: \$262,500

Total costs: \$381,500

Role: PI

**Alberta Heritage Foundation for Medical Research (AHFMR) Postdoctoral Research Grant**

**Dates: 1/2003-8/2004**

Project Title: "Effects of stimulant drugs on experience-dependent synaptic plasticity"

The goal of this research project is to characterize the effects of stimulant-induced changes in dendritic structure and spine density on subsequent experience-dependent structural plasticity.

Role: Postdoctoral-fellow; Tissue-preparation (Golgi-Cox staining) and quantification of dendritic length, branching, and spine density: Behavioral analysis (e.g., learning and motor behavior).

**SERVICE**

**Professional Organizations (\* indicates elected position)**

\*Officer, Fetal Alcohol Spectrum Disorders Study Group ([www.fasdsq.org](http://www.fasdsq.org)), 2015-2019

Secretary 2015-16, Treasurer 2016-17, Vice-President 2017-18, President 2018-19.

**Reviewing for Journals (ad hoc):**

*Addiction Biology*

*Alcohol*

*Alcohol and Alcoholism*

*Alcohol: Clinical and Experimental Research*

*Animal Cognition*

*Behavioural Brain Research*

*Behavioural Processes*

*Biomed Central: Neuroscience*

*Brain Research Bulletin*

*British Journal of Pharmacology*

*Canadian Journal of Experimental Psychology*

*Current Psychopharmacology*

*Developmental Neuroscience*

*Developmental Psychobiology*

*Developmental Science*

*European Journal of Pharmacology*

*European Journal of Neuroscience*

*European Neuropsychopharmacology*

*Experimental Brain Research*

*Frontiers in Behavioral Neuroscience*

*Hippocampus*

*Journal of Comparative Psychology*

*Journal of Comparative and Physiological Psychology*

*Journal of Experimental Psychology: Animal Behavior Processes*

*Journal of Experimental Psychology: Animal Learning and Cognition*

*Journal of Experimental Psychology: Learning, Memory, and Cognition*

*Journal of the Experimental Analysis of Behavior*

*Journal of the International Neuropsychological Society*

*Journal of Neuroscience*

*Learning and Motivation*  
*Neurobiology of Aging*  
*Neurobiology of Learning and Memory*  
*NeuroImage*  
*Neuropharmacology*  
*Neuropsychologia*  
*Neuroscience*  
*Neuroscience Journal*  
*Neuroscience Letters*  
*Neurotoxicology*  
*Neurotoxicology Research*  
*PLoS One*  
*Psychological Review*  
*Psychological Science*  
*Psychopharmacology*  
*Physiological Psychology*  
*Physiology and Behavior*  
*Synapse*

**Reviewing for Funding Organizations:**

NIH-NIAAA AA04 Study Section, Member, July 2014 - 2020.  
NIH-F02A Behavioral Neuroscience Review Panel (NRSAs F30,F31,F32 awards)  
Mar, 2012 – Mar, 2013  
NIH-NIAAA AA04 Study Section, Guest reviewer, November, 2013.  
*Ad hoc* reviewer, National Science Foundation (NSF).  
*Ad hoc* reviewer, National Science and Engineering Research Council (NSERC) of Canada  
*Ad hoc* reviewer: Canadian Institutes of Health Research (CIHR).  
*Ad hoc* reviewer, Canadian Institute for Health Research (CIHR). Canada Research Chairs (CRC) program.  
*Ad hoc* reviewer, Wellcome Trust, UK  
*Ad hoc* reviewer. Hospital for Sick Children. Toronto, CA.  
*Ad hoc* reviewer. National Institutes of Health (NIH). 2020-present.

**University Service (UNM):**

2008-2013. Scientific Member, Institutional Animal Care and Use Committee (IACUC).  
2013-2018. Chair, Institutional Animal Care and Use Committee (IACUC).  
2014-present. Animal Research Advisory Committee (ARAC).  
2019-2020. Assistant VP for Research Main Campus

**Departmental Service (PSYCHOLOGY AT UNM):**

2005-8. UNM Psychology Department Computer Committee.  
2006-present. UNM Psychology Department Animal Research Facility Committee.  
2008-2010. UNM Psychology Department Human Subjects Committee.  
2010-2013: Psychology Department Colloquium committee  
2011-2017: *Chair*, Cognition, Brain and Behavior Area  
2011-2017: Policy and Planning committee  
2014-2015 : Salary committee  
2016-present : Director Psychology Honors Program  
2018 (spring) : Acting Chair  
2020-Present : Chair

**Other Service at UNM:**

2007-2012. Faculty advisor, UNM Neuroscience Club  
2011. Review committee, Teaching Excellence Awards, College of Arts and Sciences, UNM  
2011. Review committee, Teaching Assistant Awards, College of Arts and Sciences, UNM  
2007-present. Faculty Advisor for the Quad-L Foundation ([www.unm.edu/~quadl](http://www.unm.edu/~quadl))

2020-present. College of Arts and Sciences Curriculum Committee

**Community Service:**

Feb 24, 2006 – Science Fair Judge – Cottonwood Montessori School Corrales, NM

April 7, 2006 – Presentation to New Mexico Psychological Association (NMPA). Title: *Stimulant Drugs, Brain Plasticity, and Behavior*.

2005-6. Mentor to Andrew Abernathy, Rio Rancho mid-high school.

Mar 14, 2008 – Science Fair Judge – New Mexico Academy of Sciences. Judge for junior division paper competition.

2017. Advisor to Madeline Sussman (Jefferson Middle School) for Science Fair Project

Fetal Alcohol Spectrum Disorders Awareness Day/Month. 2014-2020.