

Rebecca D. Burwell, Ph.D.
Department of Cognitive, Linguistic, and Psychological Sciences
Curriculum Vitae and Mentoring CV (p.32)

Name and Position:

Rebecca D. Burwell, Ph.D.
Albert D. Mead Professor Emerita
Department of Cognitive, Linguistic, and Psychological Sciences
Department of Neuroscience (secondary)

Education:

Ph.D., The University of North Carolina at Chapel Hill, 1992
Experimental and Biological Psychology Program
Thesis title: The Effects of Aging on Brain Dopamine Systems and Behavior
M.A., The University of North Carolina at Chapel Hill, 1989
Clinical Psychology Program
Thesis title: The Relationship Between Age-related Deficits in Spatial Learning
and Diurnal Rhythms
B.A., Southern Methodist University, 1974

Professional Appointments:

Albert D. Mead Professor Emerita of Cognitive and Psychological Sciences, 7/1/2023-present

Departmental Chair: Cognitive, Linguistic, and Psychological Sciences, 7/1/2019-6/30/2022

Endowed Chair: Albert D. Mead Professor of Cognitive, Linguistic, and Psychological Sciences, 2017-present

Professor of Cognitive, Linguistic, and Psychological Sciences (secondary appointment in Neuroscience), Brown University, 2011-6/30/2023

Professor of Psychology (secondary appointment in Neuroscience), Brown University, 2006-present

Associate Professor of Neuroscience (secondary appointment), Brown University, 2003-2006

Associate Professor of Psychology, Brown University, 2002-2006

Assistant Professor of Psychology, Brown University, 1996-2002

Postdoctoral Fellow and Lecturer, Center for Behavioral Neuroscience, The State University of New York at Stony Brook, 1993-1996

Postdoctoral Research Associate, Laboratory for Neuronal Structure and Function, The Salk Institute for Biological Studies, 1992-1993

Academic Honors:

National Merit Scholarship, 1971-1974
University Scholar, Southern Methodist University, 1973-1974
James R. Kenan Fellowship, University of North Carolina at Chapel Hill, 08/87-05/88
NSF Predoctoral Fellowship, 06/88-05/91
APA Division 20 Student Research Award, 1991
NIH Predoctoral Fellowship, 06/91-08/92
NIMH Postdoctoral Fellowship, 12/92-11/94
McDonnell-Pew Fellowship to Cold Spring Harbor Biology of Memory Course, Summer 1993
NIMH Postdoctoral Fellowship, 03/95-02/96
Salomon Award: The Postrhinal Cortex and Context Conditioning, 1997-1999
NSF Career Development Award: Cognitive Functions of the Postrhinal Cortex, 1999-2003
Karen T. Romer Prize for Undergraduate Advising, 2010
Keynote speaker, Scholarship Sewanee Undergraduate Research Day, Sewanee: The University of the South, 2013.
Elected Fellow of the American Psychological Association, 2013
Elected Fellow of the Association for Psychological Science, 2013
Keynote Speaker, Women in Learning Luncheon, APA Annual Conference, 2014.
Women in Learning, Certificate of Appreciation, August 8, 2014.
Selected Editor-in-Chief, *Behavioral Neuroscience*, a journal of the American Psychological Association, January 2015-December 2020.
Elected Fellow of American Association for the Advancement of Science (AAAS), 2015.
Elected member of the Memory Disorders Research Society, 2015.
Special Guest, SfN-Sponsored Social: Hippocampus Social, Society for Neuroscience Annual Meeting, November 14, 2016.
Keynote Speaker, Annual SfN Chapter Conference, University of Florida, March 17, 2017.
Albert D. Mead Professor of Cognitive, Linguistic, and Psychological sciences, Brown University, 2017-present.
Member of the F1000 Faculty at the invitation of Catherine Dulac and Trevor W Robbins, who run the Behavioral Neuroscience Section, February 2018-present
Dartmouth College Leaton Lecturer in Behavioral Neuroscience for academic year 2018-19
President's Award for Excellence in Faculty Governance, Brown University, 2019

Professional Organizations:

American Psychological Association, 1988-2023lected Fellow in 2013
American Association for the Advancement of Science, 2023-1997, elected Fellow in 2015
Association for Psychological Science, 1988-2023, elected Fellow in 2013
Sigma Xi, The Scientific Research Society, 1996-2023
American Association for the Advancement of Science, Elected Fellow, 2015
Memory Disorders Research Society, Elected Member in 2015
Faculty of One Thousand, Invited, 2018-2023
Society for Behavioral Neuroscience and Comparative Psychology, 1988-2023, Executive Committee, 2015-2020
Society for Neuroscience, 1988-2023
Carney Institute for Brain Sciences, since 1998
Brown Center for Vision Research, since 2012
Women in Learning, since 2014
Society for Social Neuroscience, 2020-2023

Research Grants:

Completed grants (external)

- NSF IOS-1656488 Burwell (PI) 05/01/2017-4/30/2023
Circuit analysis of recognition memory
We recently published evidence for a new function for temporal coding such that the specific frequency of synchronous neuronal activity in the perirhinal cortex transmits specific information about the novelty and familiarity of individual items. The implication is that these signals are used to guide appropriate exploratory behaviors. The goal of this grant is to elucidate the circuits and mechanisms underlying temporal coding in the perirhinal cortex.
- NIMH 1R01MH108729-01 Burwell (PI) 12/15/2015-12/14/2022
Circuit analysis of corticohippocampal interactions in memory
The goal of this grant is to understand how MTL structures interact to represent and use object and context information in the service of cognition and behavior. Multisite electrophysiology and optogenetic manipulation in behaving rodents will be used to examine how the PER, POR and HC interact to represent contexts and objects, laying the ground work for understanding how context is represented in the brain and how such representations are used to guide cognition and behavior.
- P20GM103430 Burwell (Co-PI) 05/01/2017-4/30/2019
RI-INBRE Program Collaborative Proposal.
Functional differentiation of the posterior parietal cortex
- NSF Award (IOS 1146334) PI: Burwell 2012-2017
Cognitive Functions of the Postrhinal Cortex,
- DARPA REPAIR (N66001-10-C-2010) Co-PI: Burwell. 09/2012-08/2014 (NCE 2015)
Phase II: Brain Reorganization and Plasticity to Accelerate Injury Recovery: Multi-scale and Multi-modal Models Enabled by Next Generation Neurotechnology
PI: Krishna Shenoy (Stanford University), Brown Subcontract PI: Arto Nurmikko, Brown Subcontract Co-PI: Burwell.
- DARPA REPAIR (N66001-10-C-2010) Co-PI: Burwell. 04/2010-03/2012
Phase I: Brain Reorganization and Plasticity to Accelerate Injury Recovery Multi-scale and Multi-modal Models Enabled by Next Generation Neurotechnology,
Stanford PI: Krishna Shenoy, Brown Subcontract PI: Arto Nurmikko, Co-PI: Burwell.
- NSF EFRI Award (EFRI 0937848) Co-PI: Burwell. 2009-2013 (NCE2014)
Dynamic Sensing and Actuating of Sensory and Motor Neural Microcircuits.),
PI: Arto Nurmikko,
- NSF Award (IOS 0522220) PI: Burwell 2005-2010
Cognitive Functions of the Postrhinal Cortex,
- NIMH (5R01MH060284), PI: Burwell 2000-2007
Corticohippocampal Systems and Function in the Mouse

NSF Career Award (IBN 9875792): PI: Burwell 1998-2006
Cognitive Functions of the Postrhinal Cortex

NIMH BSTART Award (R03MH057268) PI: Burwell 1997-1998
The Contribution of the Perirhinal Cortex to Configural Learning

Completed grants (internal)

Brown Institute for Brain Science Burwell (Co-PI) 07/01/2015-6/30/2020
Disorders of the cerebrospinal fluid
Co-PIs: Petra Klinge, Christopher Moore, and Maria Lehtinen.

Brown Institute for Brain Science Burwell (Co-PI) 03/01/2018-02/28/2018
NPNI New Frontiers Pilot Grant
Learning not to avoid: a translational approach with implications for anxiety disorders.
Co-PI: Mascha van't Wout-Frank

Completed Research:

Chapters in books

1. Gallagher, M., Nagahara, A. H., & Burwell, R. D. (1995). Cognition and hippocampal systems in aging: Animal models. In J. L. McGaugh, N. Weinberger, & G. Lynch (Eds.), *Brain and memory: Modulation and mediation of neuroplasticity* (pp. 103-126). New York: Oxford University Press.
2. Burwell, R., Suzuki, W., Insausti, R., & Amaral, D. (1996). Some observations on the perirhinal and parahippocampal cortices in the rat, monkey, and human brains. In *Perception, memory and emotion*: Elsevier.
3. Burwell, R. D., Bucci, D. J., Wiig, K. A., Saddoris, M. P., & Sanborn, M. R. (2002). Experimental lesions of the parahippocampal region in rats. In M. P. Witter & F. G. Wouterlood (Eds.), *The Parahippocampal Region: Organization and Role in Cognitive Functions* (1st ed.): Oxford University Press.
4. Burwell, R. (2002). Perirhinal cortex and associated cortical areas. In M. P. Witter & F. G. Wouterlood (Eds.), *The Parahippocampal Region: Organization and Role in Cognitive Functions* (1st ed.): Oxford University Press.
5. Burwell, R., & Witter, M. (2002). Basic anatomy of the parahippocampal region in monkeys and rats. In M. P. Witter & F. G. Wouterlood (Eds.), *The Parahippocampal Region, Organization and Role in Cognitive Functions* (pp. 35-59). London: Oxford University Press.
6. Burwell, R. D., & Agster, K. L. (2008). Anatomy of the Hippocampus and the Declarative Memory System. In H. Eichenbaum (Ed.), (1 ed., Vol. 3, pp. 47-66). Oxford: Elsevier.
7. Burwell, R. D., & Agster, K. L. (2008). Anatomy of the hippocampus and the declarative memory system. In J. H. Byrne (Ed.), *Concise Learning and Memory: The Editor's Selection* (pp. 189-208). London: Academic Press.
8. Ho, J. W., & Burwell, R. D. (2014). Perirhinal and postrhinal functional inputs to the hippocampus. In *Space, Time and Memory in the Hippocampal Formation* (pp. 55-81): Springer.
9. Scaplen, K. M., Agster, K. L., & Burwell, R. D. (2017). Anatomy of the Hippocampus and the Declarative Memory System. In J. H. Byrne (Ed.), *Concise Learning and Memory: The Editor's Selection* (1 ed.). Oxford: Academic Press.
10. Poeta, D. L., & Burwell, R. D. (2018). Parahippocampal Cortex (PHC). In J. Vonk & T.

Shackelford (Eds.), *Encyclopedia of Animal Cognition and Behavior* (pp. 1-5). Cham: Springer International Publishing.

Refereed journal articles

1. Gallagher, M., & Burwell, R. D. (1989). Relationship of age-related decline across several behavioral domains. *Neurobiology of aging*, *10*(6), 691-708. doi:10.1016/0197-4580(89)90006-7
2. Gallagher, M., Burwell, R. D., Kodsi, M. H., McKinney, M., Southerland, S., Vella-Rountree, L., & Lewis, M. H. (1990). Markers for biogenic amines in the aged rat brain: relationship to decline in spatial learning ability. *Neurobiology of aging*, *11*(5), 507-514. doi:10.1016/0197-4580(90)90111-c
3. Burwell, R. D., Whealin, J., & Gallagher, M. (1992). Effects of aging on the diurnal pattern of water intake in rats. *Behavioral and neural biology*, *58*(3), 196-203. doi:10.1016/0163-1047(92)90468-j
4. Burwell, R. D., & Gallagher, M. (1993). A longitudinal study of reaction time performance in Long-Evans rats. *Neurobiology of aging*, *14*(1), 57-64. doi:10.1016/0197-4580(93)90023-5
5. Duley, J. F., Wilkins, J. W., Hamby, S. L., Hopkins, D. G., Burwell, R. D., & Barry, N. S. (1993). Explicit scoring criteria for the Rey-Osterrieth and Taylor complex figures. *The Clinical Neuropsychologist*, *7*(1), 29-38.
6. Gallagher, M., Burwell, R., & Burchinal, M. (1993). Severity of spatial learning impairment in aging: development of a learning index for performance in the Morris water maze. *Behavioral neuroscience*, *107*(4), 618-626. doi:10.1037//0735-7044.107.4.618
7. Whealin, J. M., Burwell, R. D., & Gallagher, M. (1993). The effects of aging on diurnal water intake and melatonin binding in the suprachiasmatic nucleus. *Neuroscience letters*, *154*(1-2), 149-152. doi:10.1016/0304-3940(93)90193-o
8. Burwell, R. D., Lawler, C. P., & Gallagher, M. (1995). Mesostriatal dopamine markers in aged Long-Evans rats with sensorimotor impairment. *Neurobiology of aging*, *16*(2), 175-186. doi:10.1016/0197-4580(94)00157-x
9. Burwell, R. D., Witter, M. P., & Amaral, D. G. (1995). Perirhinal and postrhinal cortices of the rat: a review of the neuroanatomical literature and comparison with findings from the monkey brain. *Hippocampus*, *5*(5), 390-408. doi:10.1002/hipo.450050503
10. Chen, H., & Burwell, R. (1996). An anterograde tract-tracing study of the perirhinal and postrhinal cortical projections to the thalamus in the rat brain. *Journal of Undergraduate Research*, *3*, 47-68.

11. Burwell, R. D., & Amaral, D. G. (1998a). Cortical afferents of the perirhinal, postrhinal, and entorhinal cortices of the rat. *The Journal of comparative neurology*, *398*(2), 179-205. doi:10.1002/(sici)1096-9861(19980824)398:2<179::aid-cne3>3.0.co;2-y
12. Burwell, R. D., & Amaral, D. G. (1998b). Perirhinal and postrhinal cortices of the rat: interconnectivity and connections with the entorhinal cortex. *The Journal of comparative neurology*, *391*(3), 293-321. doi:10.1002/(sici)1096-9861(19980216)391:3<293::aid-cne2>3.0.co;2-x
13. Burwell, R. D., Shapiro, M. L., O'Malley, M. T., & Eichenbaum, H. (1998). Positional firing properties of perirhinal cortex neurons. *Neuroreport*, *9*(13), 3013-3018. doi:10.1097/00001756-199809140-00017
14. Wiig, K. A., & Burwell, R. D. (1998). Memory impairment on a delayed non-matching-to-position task after lesions of the perirhinal cortex in the rat. *Behavioral neuroscience*, *112*(4), 827-838. doi:10.1037//0735-7044.112.4.827
15. Bucci, D. J., Phillips, R. G., & Burwell, R. D. (2000). Contributions of postrhinal and perirhinal cortex to contextual information processing. *Behavioral neuroscience*, *114*(5), 882-894. doi:10.1037//0735-7044.114.5.882
16. Burwell, R. D. (2000). The parahippocampal region: corticocortical connectivity. *Annals of the New York Academy of Sciences*, *911*, 25-42. doi:10.1111/j.1749-6632.2000.tb06717.x
17. Burwell, R. D. (2001). Borders and cytoarchitecture of the perirhinal and postrhinal cortices in the rat. *The Journal of comparative neurology*, *437*(1), 17-41. doi:10.1002/cne.1267
18. Bucci, D. J., Saddoris, M. P., & Burwell, R. D. (2002). Contextual fear discrimination is impaired by damage to the postrhinal or perirhinal cortex. *Behavioral neuroscience*, *116*(3), 479-488. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/12049329>
19. Rapp, P. R., Deroche, P. S., Mao, Y., & Burwell, R. D. (2002). Neuron number in the parahippocampal region is preserved in aged rats with spatial learning deficits. *Cerebral cortex*, *12*(11), 1171-1179. doi:10.1093/cercor/12.11.1171
20. Burwell, R. D., & Hafeman, D. M. (2003). Positional firing properties of postrhinal cortex neurons. *Neuroscience*, *119*(2), 577-588. doi:10.1016/s0306-4522(03)00160-x
21. Bucci, D. J., & Burwell, R. D. (2004). Deficits in attentional orienting following damage to the perirhinal or postrhinal cortices. *Behavioral neuroscience*, *118*(5), 1117-1122. doi:10.1037/0735-7044.118.5.1117
22. Burwell, R. D., Bucci, D. J., Sanborn, M. R., & Jutras, M. J. (2004). Perirhinal and postrhinal contributions to remote memory for context. *The Journal of neuroscience*, *24*(49), 11023-11028. doi:10.1523/JNEUROSCI.3781-04.2004

23. Burwell, R. D., Saddoris, M. P., Bucci, D. J., & Wiig, K. A. (2004). Corticohippocampal contributions to spatial and contextual learning. *The Journal of neuroscience*, *24*(15), 3826-3836. doi:10.1523/JNEUROSCI.0410-04.2004
24. Long, M. A., Jutras, M. J., Connors, B. W., & Burwell, R. D. (2005). Electrical synapses coordinate activity in the suprachiasmatic nucleus. *Nature neuroscience*, *8*(1), 61-66. doi:10.1038/nn1361
25. Furtak, S. C., Wei, S. M., Agster, K. L., & Burwell, R. D. (2007). Functional neuroanatomy of the parahippocampal region in the rat: the perirhinal and postrhinal cortices. *Hippocampus*, *17*(9), 709-722. doi:10.1002/hipo.20314
26. Kerr, K. M., Agster, K. L., Furtak, S. C., & Burwell, R. D. (2007). Functional neuroanatomy of the parahippocampal region: the lateral and medial entorhinal areas. *Hippocampus*, *17*(9), 697-708. doi:10.1002/hipo.20315
27. Theroux, S., Pereira, M., Casten, K. S., Burwell, R. D., Yeung, K. C., Sedivy, J. M., & Klysik, J. (2007). Raf kinase inhibitory protein knockout mice: expression in the brain and olfaction deficit. *Brain research bulletin*, *71*(6), 559-567. doi:10.1016/j.brainresbull.2006.11.010
28. Agster, K. L., & Burwell, R. D. (2009). Cortical efferents of the perirhinal, postrhinal, and entorhinal cortices of the rat. *Hippocampus*, *19*(12), 1159-1186. doi:10.1002/hipo.20578
29. Furtak, S. C., Cho, C. E., Kerr, K. M., Barredo, J. L., Alleyne, J. E., Patterson, Y. R., & Burwell, R. D. (2009). The Floor Projection Maze: A novel behavioral apparatus for presenting visual stimuli to rats. *Journal of neuroscience methods*, *181*(1), 82-88. doi:10.1016/j.jneumeth.2009.04.023
30. Wang, J., Borton, D. A., Zhang, J., Burwell, R. D., & Nurmikko, A. V. (2010). A neurophotonic device for stimulation and recording of neural microcircuits. *Annu Int Conf IEEE Eng Med Biol Soc*, *2010*, 2935-2938. doi:10.1109/IEMBS.2010.5626296
31. Casten, K. S., Gray, A. C., & Burwell, R. D. (2011). Discrimination learning and attentional set formation in a mouse model of Fragile X. *Behavioral neuroscience*, *125*(3), 473-479. doi:10.1037/a0023561
32. Wang, J., Ozden, I., Diagne, M., Wagner, F., Borton, D., Brush, B., . . . Diester, I. (2011). *Approaches to optical neuromodulation from rodents to non-human primates by integrated optoelectronic devices*. Paper presented at the Engineering in Medicine and Biology Society, EMBC, 2011 Annual International Conference of the IEEE.
33. Furtak, S. C., Ahmed, O. J., & Burwell, R. D. (2012). Single neuron activity and theta modulation in postrhinal cortex during visual object discrimination. *Neuron*, *76*(5), 976-988. doi:10.1016/j.neuron.2012.10.039

34. Gastelum, E. D., Guilhardi, P., & Burwell, R. D. (2012). The effects of combined perirhinal and postrhinal damage on complex discrimination tasks. *Hippocampus*, 22(10), 2059-2067. doi:10.1002/hipo.22063
35. Sills, J. B., Connors, B. W., & Burwell, R. D. (2012). Electrophysiological and morphological properties of neurons in layer 5 of the rat postrhinal cortex. *Hippocampus*, 22(9), 1912-1922. doi:10.1002/hipo.22026
36. Wang, J., Wagner, F., Borton, D. A., Zhang, J., Ozden, I., Burwell, R. D., . . . Deisseroth, K. (2012). Integrated device for combined optical neuromodulation and electrical recording for chronic in vivo applications. *Journal of neural engineering*, 9(1), 016001. doi:10.1088/1741-2560/9/1/016001
37. Agster, K. L., & Burwell, R. D. (2013). Hippocampal and subicular efferents and afferents of the perirhinal, postrhinal, and entorhinal cortices of the rat. *Behav Brain Res*, 254, 50-64. doi:10.1016/j.bbr.2013.07.005
38. Beaudin, S. A., Singh, T., Agster, K. L., & Burwell, R. D. (2013). Borders and comparative cytoarchitecture of the perirhinal and postrhinal cortices in an F1 hybrid mouse. *Cerebral cortex*, 23(2), 460-476. doi:10.1093/cercor/bhs038
39. Jacobson, T. K., Ho, J. W., Kent, B. W., Yang, F. C., & Burwell, R. D. (2014). Automated visual cognitive tasks for recording neural activity using a floor projection maze. *Journal of visualized experiments : JoVE*(84), e51316. doi:10.3791/51316
40. Scaplen, K. M., Gulati, A. A., Heimer-McGinn, V. L., & Burwell, R. D. (2014). Objects and landmarks: hippocampal place cells respond differently to manipulations of visual cues depending on size, perspective, and experience. *Hippocampus*, 24(11), 1287-1299. doi:10.1002/hipo.22331
41. Gallagher, M., Burwell, R., & Burchinal, M. (2015). Severity of spatial learning impairment in aging: Development of a learning index for performance in the Morris water maze. *Behavioral neuroscience*, 129(4), 540-548. doi:10.1037/bne0000080
42. Ho, J. W., Poeta, D. L., Jacobson, T. K., Zolnik, T. A., Neske, G. T., Connors, B. W., & Burwell, R. D. (2015). Bidirectional Modulation of Recognition Memory. *The Journal of neuroscience*, 35(39), 13323-13335. doi:10.1523/JNEUROSCI.2278-15.2015
43. Tomas Pereira, I., & Burwell, R. D. (2015). Using the spatial learning index to evaluate performance on the water maze. *Behavioral neuroscience*, 129(4), 533-539. doi:10.1037/bne0000078
44. Agster, K. L., Tomas Pereira, I., Saddoris, M. P., & Burwell, R. D. (2016). Subcortical connections of the perirhinal, postrhinal, and entorhinal cortices of the rat. II. efferents. *Hippocampus*, 26(9), 1213-1230. doi:10.1002/hipo.22600

45. Tomas Pereira, I., Agster, K. L., & Burwell, R. D. (2016). Subcortical connections of the perirhinal, postrhinal, and entorhinal cortices of the rat. I. afferents. *Hippocampus*, 26(9), 1189-1212. doi:10.1002/hipo.22603
46. Heimer-McGinn, V. R., Poeta, D. L., Aghi, K., Udawatta, M., & Burwell, R. D. (2017). Disconnection of the Perirhinal and Postrhinal Cortices Impairs Recognition of Objects in Context But Not Contextual Fear Conditioning. *The Journal of neuroscience*, 37(18), 4819-4829. doi:10.1523/JNEUROSCI.0254-17.2017
47. Scaplen, K. M., Ramesh, R. N., Nadvar, N., Ahmed, O. J., & Burwell, R. D. (2017). Inactivation of the Lateral Entorhinal Area Increases the Influence of Visual Cues on Hippocampal Place Cell Activity. *Front Syst Neurosci*, 11(40), 40. doi:10.3389/fnsys.2017.00040
48. Yang, F. C., Jacobson, T. K., & Burwell, R. D. (2017). Single neuron activity and theta modulation in the posterior parietal cortex in a visuospatial attention task. *Hippocampus*, 27(3), 263-273. doi:10.1002/hipo.22691
49. Hwang, E., Willis, B. S., & Burwell, R. D. (2018). Prefrontal connections of the perirhinal and postrhinal cortices in the rat. *Behav Brain Res*, 354, 8-21. doi:10.1016/j.bbr.2017.07.032
50. Bounds, H. A., Poeta, D. L., Klinge, P. M., & Burwell, R. D. (2019). Paw-Print Analysis of Contrast-Enhanced Recordings (PrAnCER): A Low-Cost, Open-Access Automated Gait Analysis System for Assessing Motor Deficits. *Journal of visualized experiments : JoVE*(150). doi:10.3791/59596
51. Garnaat, S., Burwell, R., & van't Wout-Frank, M. (2020). Testing the Impact of Neuromodulation on Contextual Reversal Learning and Generalization. *Biological Psychiatry*, 87(9), S77.
52. Ghosh, M., Shanahan, B. E., Furtak, S. C., Mashour, G. A., Burwell, R. D., & Ahmed, O. J. (2020). Instantaneous amplitude and shape of postrhinal theta oscillations differentially encode running speed. *Behavioral neuroscience*, 134(6), 516-528. doi:10.1037/bne0000416
53. Yang, F. C., & Burwell, R. D. (2020). Neuronal Activity in the Rat Pulvinar Correlates with Multiple Higher-Order Cognitive Functions. *Vision (Basel)*, 4(1). doi:10.3390/vision4010015
54. Bucci, D. J., Phillips, R. G., & Burwell, R. D. (2021). Contributions of postrhinal and perirhinal cortex to contextual information processing. *Behavioral neuroscience*, 135(3), 313-325. doi:10.1037/bne0000436
55. Peng, X., & Burwell, R. D. (2021). Beyond the hippocampus: The role of parahippocampal-prefrontal communication in context-modulated behavior. *Neurobiol Learn Mem*, 185, 107520. doi:10.1016/j.nlm.2021.107520

56. Wise, T. B., Burwell, R. D., & Templer, V. L. (2021). Social preference in rats not impacted by posterior parietal activity despite overall changes in familiarity-based social behavior. *bioRxiv*, 2021.2011.2024.469924. doi:10.1101/2021.11.24.469924
57. DeAngeli, N. E., Fournier, D. I., Gullledge, A. T., Burwell, R. D., Todd, T. P., & Bucci, D. J. (2022). Postrhinal cortex contributions to the expression of auditory fear conditioning. *Neurobiol Learn Mem*, 191, 107609. doi:10.1016/j.nlm.2022.107609
58. Estela-Pro, V. J., & Burwell, R. D. (2022). The anatomy and function of the postrhinal cortex. *Behavioral neuroscience*, 136(2), 101-113. doi:10.1037/bne0000500
59. Heimer-McGinn, V. R., Trettel, S. G., Kent, B., Singh, A. N., & Burwell, R. D. (2022). Neurons in the postrhinal cortex encode nonspatial context during visual biconditional discrimination. *bioRxiv*, 2022.2006.2023.497405. doi:10.1101/2022.06.23.497405
60. Yang, F. C., Dokovna, L. B., & Burwell, R. D. (2022). Functional Differentiation of Dorsal and Ventral Posterior Parietal Cortex of the Rat: Implications for Controlled and Stimulus-Driven Attention. *Cerebral cortex*, 32(9), 1787-1803. doi:10.1093/cercor/bhab308
61. van 't Wout-Frank, M., Garnaat, S. L., Faucher, C. R., Arulpragasam, A. R., Cole, J. E., Philip, N. S., & Burwell, R. D. (2023). Transcranial direct current stimulation impairs updating of avoidance-based associative learning. *Front Hum Neurosci*, 17, 1104614. doi:10.3389/fnhum.2023.1104614
62. Journal articles in preparation or under review
63. Heimer-McGinn, V.R. Trettel, S.G., Kent, B., Singh, A.N., Burwell., R.D. Neurons in the postrhinal cortex encode nonspatial context during visual biconditional discrimination. *bioRxiv* 2022.06.23.497405; doi: <https://doi.org/10.1101/2022.06.23.497405>
64. Wise, T.B., Templer, V.L., Burwell., R.D. Social preference in rats not impacted by posterior parietal activity despite overall changes in familiarity-based social behavior. *bioRxiv* 2021.11.24.469924; doi: <https://doi.org/10.1101/2021.11.24.469924>

Commentaries and editorial materials

1. Rapp, P. R., Burwell, R. D., & West, M. J. (1996). Individual differences in aging: implications for stereological studies of neuron loss. *Neurobiology of aging*, 17(3), 495-496; discussion 500. doi:10.1016/0197-4580(96)00012-7
2. Burwell, R. D., & Eichenbaum, H. (1999). What's new in animal models of amnesia? *Behavioral and Brain Sciences*, 22(03), 446-447.
3. Burwell, R. D., & Furtak, S. C. (2008). Recognition memory: can you teach an old dogma new tricks? *Neuron*, 59(4), 523-525. doi:10.1016/j.neuron.2008.08.004

4. Burwell, R. D. (2015). The neural bases of cognition and behavior. *Behavioral neuroscience*, 129(1), 1. doi:10.1037/bne0000035
5. Baxter, M. G., & Burwell, R. D. (2017). Promoting transparency and reproducibility in Behavioral Neuroscience: Publishing replications, registered reports, and null results. *Behavioral neuroscience*, 131(4), 275-276. doi:10.1037/bne0000207
6. Burwell, R. D., & Templer, V. L. (2017). Jamais vu all over again. *Nature neuroscience*, 20(9), 1194-1196. doi:DOI 10.1038/nn.4625
7. Garnaat, S., Burwell, R., & van't Wout-Frank, M. (2020). Testing the Impact of Neuromodulation on Contextual Reversal Learning and Generalization. *Biological Psychiatry*, 87(9), S77
8. Burwell, R. D. (2021). Remembering David Bucci. *Behavioral neuroscience*, 135(1), 2-3. doi:10.1037/bne0000452

Book reviews

1. Kruger, L., Saporta, S., & Swanson, L.W. (1995) *Photographic atlas of the rat brain: the cell and fiber architecture illustrated in three planes with stereotaxic coordinates* (New York: Cambridge University Press) 299 pp.

Abstracts and conference proceedings

2. Burwell, R.D. and Gallagher, M. (1988) The relationship of age-related deficits across several behavioral domains. *Society for Neuroscience Abstracts*, 14(1), 391.
3. Miller, P.R., Kodosi, M.H., Sutherland, S., Burwell, R.D., Lewis, M.H. and Gallagher, M. (1989) Biogenic amines in the aged rat brain: Relationship to behavior. *Society for Neuroscience Abstracts*, 15(1), 262.
4. Burwell, R.D. Thai, L., Stenvers, K. and Gallagher, M. (1990) Effects of aging on the mesostriatal dopamine system: A behavioral and neurobiological study. *Society for Neuroscience Abstracts*, 16(1), 840.
5. Burwell, R.D. Whealin, J. and Gallagher, M. (1991) Effects of aging on the mesostriatal dopamine system: Focus on the striatum. *Society for Neuroscience Abstracts*, 17(1), 368.
6. Wortman, I.A., Rice, D.C., Burwell, R.D., Lawler, C.P., Watts, V.J., Matthis, C.A., Lewis, M.H., and Mailman, R.B. (1991) Quantitative autoradiography of iodinated dopamine ligands: Potential pitfalls in the use of iodinated benzamides. *Society for Neuroscience Abstracts*, 17(1), 819.
7. Burwell, R.D. (1991) Aging effects on brain dopamine systems and behavior: Behavioral studies. *Proceedings: The 99th Annual Convention of the American Psychological Association*.

8. Burwell, R.D. (1992). Age-related slowing of reaction time correlates with lateralization of striatal patch area. *Fourth Annual Convention of the American Psychological Society*.
9. Burwell, R.D., Burchinal, M. and Gallagher, M. (1992) Severity of spatial learning impairment in aging assessed by the development of a learning index. *Society for Neuroscience Abstracts*, 18(2), 1481.
10. Burwell, R.D. and Amaral, D.G. (1993) A PHA-L study of projections from perirhinal cortex in the rat. *Society for Neuroscience Abstracts*, 19(1), 853.
11. Burwell, R.D., Caballero, M., Witter, M.P., and Amaral, D.G. (1994) A PHA-L study of perirhinal projections to the thalamus in the rat. *Society for Neuroscience Abstracts*, 20(2), 1415.
12. Burwell, R.D. and Amaral, D.G. (1995) The issue of parahippocampal cortex in the rat. *Society for Neuroscience Abstracts*, 21(2), 1494.
13. Burwell, R.D. and Amaral, D.G. (1996) Perirhinal and postrhinal connections with the rat entorhinal cortex, *Society for Neuroscience Abstracts*, 22(2), 503.
14. Burwell, R. D., & Eichenbaum, H. (1997). Perirhinal cortex neurons do not exhibit spatial firing patterns. *Society for Neuroscience Abstracts*, 23(1), 1599.
15. Wiig, K.A., M.F. Bear, and R.D. Burwell. (1997) Comparable memory impairment following electrolytic and neurotoxic lesions of the perirhinal cortex. *Soc. Neurosci. Abst.* 23: 1599.
16. Burwell, R. D., & Phillips, R. G. (1998). Lesions of the postrhinal cortex disrupt conditioning to the training context but not to an explicit auditory cue. *Soc. Neurosci. Absts.* 24(2), 1904.
17. Bucci, D. J., & Burwell, R. D. (1999). Pretraining and posttraining lesions of the rat perirhinal or postrhinal cortex produce deficits in contextual fear conditioning. *Society for Neuroscience Abstracts*, 25(1), 92.
18. Saddoris, M., Bucci, D. J., & Burwell, R. D. (1999). The effects of time-of-day cues on context discrimination in a classical fear conditioning paradigm. *Society for Neuroscience Abstracts*, 25(1), 92.
19. Rapp, P.R., Deroche, P., & Burwell, R.D. (2000). Preserved neuron number in the entorhinal, perirhinal and postrhinal cortices of behaviorally characterized aged rats. *Society for Neuroscience Abstracts*, 26(1).
20. Saddoris, M., Bucci, D. J., & Burwell, R. D. (2000). Effects of postrhinal/medial entorhinal cortex versus perirhinal/lateral entorhinal cortex lesions on contextual fear discrimination. *Society for Neuroscience Abstracts*, 26(1).
21. Burwell, R.D. & Hafeman, D. (2000). Positional firing properties of postrhinal neurons in the rat. *Society for Neuroscience Abstracts*, 26(1).
22. Bucci, D. J., & Burwell, R. D. (2001). Specific deficits in attentional orienting following

lesions of the postrhinal cortex. *Soc. Neurosci. Abst.*, 27.

23. Burwell, R. D., Bucci, D. J., Wiig, K. A., Saddoris, M. P., & Bear, M. F. (2001). Neurotoxic lesions of the rat parahippocampal region do not impair performance in the Morris watermaze task. *Soc. Neurosci. Abst.*, 27.
24. Hu, S. J., Letourneau, A. R., & Burwell, R. D. (2001). Postrhinal contribution to hippocampal place fields. *Soc. Neurosci. Abst.*, 27.
25. Sanborn, M. R., Bucci, D. J., & Burwell, R. D. (2001). Postrhinal and perirhinal cortex are involved in the long-term processing of contextual information. *Soc. Neurosci. Abst.*, 27.
26. Beaudin, S.A. & Burwell, R. D. (2002) Comprehensive cytoarchitectonic analysis of the cortical regions surrounding the hippocampus in the B6129PF1/J hybrid mouse. *Soc. Neurosci. Abst.*, 28.
27. Hu, S. J., & Burwell, R. D. (2002) Differential effects of entorhinal cortex and subiculum inactivation on hippocampal place fields. *Soc. Neurosci. Abst.*, 28.
28. Pflaster, A.E. & Burwell, R. D. (2002) A new visuospatial pre-cueing task in rodents: similarities to the "Posner" task. *Soc. Neurosci. Abst.*, 28.
29. Burwell, R. D. & Davies E. J. (2003). The effects of perirhinal damage on a feature positive and feature negative discrimination task *Soc. Neurosci. Abst.*, 29.
30. Agster, K. M., & Burwell, R. D. (2004). Rats sustaining perirhinal, postrhinal, or posterior parietal lesions display unique patterns of deficits in an attentional set-shifting task. *Society for Neuroscience Abstracts*, 30.
31. Burwell, R. D., Lester-Coll, N.H. & Jutras, M.J. (2004). The effects of combined perirhinal and postrhinal damage on a serial feature positive and feature negative discrimination task. *Soc. Neurosci. Abst.*, 30.
32. Long, M. A., Jutras, M. J., Burwell, R. D & Connors, B. W. (2004). Electrical synapses coordinate activity in the suprachiasmatic nucleus *Soc. Neurosci. Abst.*, 30.
33. Agster, K.L., Brown, S.F. , and Burwell, R.D. (2005). Subcortical efferents of the entorhinal, perirhinal, and postrhinal cortices of the rat. Program No. 182.13. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
34. Brown, S.F., Agster, K.L., and Burwell, R.D. (2005). Subcortical afferents of the perirhinal, postrhinal, and entorhinal cortices of the rat. Program No. 182.14. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
35. Beck, R.D. and Burwell, R.D. (2005). Connectivity between postrhinal and perirhinal cortices: important in contextual memory? Program No. 647.15. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
36. Agster, K.L., and Burwell, R.D. (2006). Contributions of perirhinal and postrhinal cortex to attentional processing. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.

37. Burwell, R.D., and Agster, K.L (2006). Hippocampal connections of the entorhinal, perirhinal, and postrhinal cortices of the rat. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
38. Barredo, J. L. Badre, D. , and R. D. Burwell. A novel task-shifting paradigm for rats to be used for the comparative analysis of executive function in rodents and
39. humans. Program No. 90.18. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008.
40. Kerr, K. M. and R. D. Burwell. The role of the postrhinal cortex in navigation: Comparisons with the dorsal hippocampus and the medial entorhinal area. Program No. 90.17. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008.
41. Furtak, S. C. and R. D. Burwell. Neuronal activity in postrhinal cortex during performance on a novel visual discrimination task. Program No. 90.16. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008.
42. Kerr, K. M. and R. D. Burwell. Single unit recording in rodent hippocampus and cortex using TBSI wireless technology. Chicago, IL: Society for Neuroscience Satellite Meeting, 2009.
43. Wang, J., Zhang, J., Borton, D., Laiwalla, F., Van Wagenen, R., Nurmikko, A.V., Burwell, R.D., Connors, B.W. Integrated device for focal optical stimulation and spatiotemporal electrical recording of neural activity for in vivo application. Program No. 485.8. 2009 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2009.
44. Furtak, S. C. and R. D. Burwell. Neural correlates of objects and places in rodent postrhinal cortex during a visual object discrimination task. Program No. 477.14. 2009 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2009.
45. Furtak, S. C. and R. D. Burwell. Neural correlates of objects and places in rodent postrhinal cortex during a visual object discrimination task. Burlington, VT: Pavlovian Society Meeting, 2009.
46. Wang, J., Borton, D.A., Burwell, R.D., & Nurmikko, A.V. An optoelectronic hybrid device for in vivo stimulation and recording of optogenetically targeted neural microcircuits in freely moving rodents. Program No. 106.14. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010.
47. Furtak, S.C. & Burwell, R.D. Parahippocampal contributions to a visual biconditional discrimination task. Program No. 806.26. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010.
48. Kerr, K.M. & Burwell, R.D. Control of dorsal hippocampal place cells by bearing cues placed on the wall of an exploratory maze vs bearing cues placed on the floor. Program No. 806.27. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010.

49. Wang, J., Borton, D. A., Zhang, J., Burwell, R. D., & Nurmikko, A. V. (2010, August). A neurophotonic device for stimulation and recording of neural microcircuits. In Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE (pp. 2935-2938). IEEE. 2010.
- A. S. Andrade, K. Bath, R. Burwell, S. Denome, D. Lipscombe. Exon-replacement in the mouse *Cacna1b* gene reveals CNS involvement of N-type calcium channel splicing. Program No. 43.11. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
50. Burwell, R.D., Ahmed, O.J., & Furtak, S.C. Theta modulation in postrhinal cortex during performance on a visual discrimination task. Program No. 407.01. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
51. Ho, J.W., Neske, G.T. & Burwell, R.D. A novel Go/NoGo task to assess neuronal correlates of visual recognition, short term memory and decision making in the rat. Program No. 407.02. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
52. Yang, F-C. & Burwell, R.D. Neuronal correlates in the posterior parietal cortex during performance on a visuospatial attention task. Program No. 407.03. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
53. Kent, B.W. & Burwell, R.D. Single-unit recording in the postrhinal cortex during an object-in-context discrimination task. Program No. 407.04. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011.
54. Burwell, R.D., Ho, J.W., Aldern, C.P., & Liu, A.R. Program No. 104.23. 2012. Neuronal activity in perirhinal and prefrontal cortices during visual discrimination in a Go/No-Go task. Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
55. Ho, J. W., Poeta, D. L., Zolnik, D. L., Jacobston, T. K., Neske, G. T., Connors, B. W, Burwell, .R. D. Presentation Title: Control of novelty exploration in rats by optogenetic modulation of perirhinal cortex. Program No. 104.24. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
56. Yang, F-C, Jacobson, T. & Burwell, R.D. Program No. 104.25. 2012. Neuronal correlates in the posterior parietal cortex during performance on a visuospatial attention task. Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
57. Kent, B.W. & Burwell, R.D. Program No. 104.26. 2012. Single units in the postrhinal cortex signal changes in context. Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
58. Singh, T., Patrick, S.L., Sugden, A.U., Burwell, R.D. & Connors, B.W. Program No. 104.27. 2012. An exceptionally sparse network of parvalbumin-expressing inhibitory interneurons in the ventral postrhinal cortex. Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
59. Kerr, K.M., Ramesh, R.N. & Burwell, R.D. Program No. 104.28. 2012. Inactivation of the lateral entorhinal cortex alters hippocampal processing of two dimensional objects.

Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.

60. Sugden, A. U., Patrick, S. L., Anand, A., Burwell, R. D., Connors, B. W., Ventral postrhinal cortex: A strong inhibitory network in the absence of parvalbumin-expressing interneurons. 235.06. 2013 Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2013.
61. Yang, F.-C., Jacobson, T. K., Burwell, R. D., Local field potential oscillations in rat posterior parietal cortex during performance on a visuospatial attention task. 669.1. 2013 Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2013.
62. Burwell, R. D., J Jacobson, T. K., Poeta, D. L., Tomas Pereira, I., Yang, F.-C., Kent, B. W., Brain circuitry underlying the representation of context. 661.15. 2013 Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2013.
63. Kent, B. W., Jacobson, T. K., Burwell, R. D. Local field potentials in the postrhinal cortex. 669.12. 2013 Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2013.
64. Jacobson, T. K., Burwell, R. D. Optogenetic modulation of the postrhinal cortex during performance on a visuospatial attention task. 176.04 2014 Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2014.
65. Heimer-McGinn, V., Poeta, D.L. Burwell, R. D. Perirhinal contributions to postrhinal representations of context. 176.06 2014 Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2014.
66. Yang, F.-C., Jacobson, T.K., Burwell, R.D. Neuronal correlates in rat posterior parietal cortex and lateral posterior thalamic nucleus during performance on a visuospatial attention task. 176.05 2014 Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2014.
67. Tomas Pereira, I., Burwell, R.D. Neuronal activity in the perirhinal and postrhinal cortex during performance on a contextual spontaneous object recognition task. 176.07 2014 Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2014.
68. Sugden, A.U., Patrick, S.L., Burwell, R.D., Connors, B.W. Robust inhibition and gamma oscillations in a cortical area that lacks parvalbumin-expressing inhibitory interneurons. 215.01 2014 Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2014.
69. Yang, F. C., Burwell, R. D. Neuronal correlates in rat posterior parietal cortex and the lateral posterior thalamic nucleus during performance on a visuospatial attention task. 724.14 2015 Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, 2015.
70. Heimer-McGinn, V.R., Poeta, D.L., Burwell R.D. Disconnection of the perirhinal and postrhinal cortices impairs recognition of objects-in-context. 724.15 2015 Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, 2015.

71. Hwang, E., Willis, B.S., Burwell, R.D. Prefrontal connections of the perirhinal and postrhinal cortices in the rat. 724.13 2015 Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, 2015.
72. Jacobson, T. K., Phillips, J.R., Burwell, R. D. Contextual dependency of conditioning and extinction in approach and avoidance behaviors. 724.16 2015 Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, 2015.
73. Yang, F. C., Burwell, R. D. Neuronal correlates in rat posterior parietal cortex and the lateral posterior thalamic nucleus during performance on a visuospatial attention task. 1P329 JNS Meeting Planner, Kobe, Japan, The 38th Neuroscience Secretariat, July 28, 2015.
74. Jacobson, T.K., Phillips, J.R., Burwell, R.D. Acquisition and extinction of avoidance behaviors: The role of context. Program No. 75.23. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
75. Heimer-McGinn, V.R., Kent, B.W., Burwell, R.D. Representations of context in the postrhinal cortex. Program No. 84.03. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
76. Estela, V.J., Burwell, R.D. Emergence of object-location conjunctive coding in the postrhinal cortex and hippocampus. Program No. 84.04. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
77. Yang, F.-C., Burwell, R.D., Inactivation of the lateral posterior thalamic nucleus on neuronal correlates in rat posterior parietal cortex during performance on a visuospatial attention task. Program No. 84.05. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
78. Hwang, E., Yang, F.-C., Burwell, R.D., The role of the rodent retrosplenial cortex in context-guided behavior. Program No. 84.06. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
79. Poeta, D.L., Bounds, H.A., Klinge, P.M., Burwell, R.D. Cognitive deficits in a rodent model of normal pressure hydrocephalus. Program No. 601.12. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, 2016.
80. Estela, V.J., Farovik, A., Burwell, R.D. Object-location conjunctive coding in the parahippocampal network. Program No. 435.03. Neuroscience Meeting Planner. Washington, DC, Society for Neuroscience, 2017.
81. Hwang, E., Yang, F.-C., Jacobson, T.K., Burwell, R.D., Neuronal activity in the retrosplenial cortex of rats performing a visuospatial attention task. Program No. 425.02. Neuroscience Meeting Planner. Washington DC, Society for Neuroscience, 2017.
82. Poeta, D.L., Bounds, H.A., Klinge, P.M., Burwell, R.D. Age-related changes in cognition in an animal model of hydrocephalus. Program No. 667.1. Neuroscience Meeting Planner. Washington DC, Society for Neuroscience, 2017.

83. E. Hwang, F.-C. Yang, T. K. Jacobson, R. D. Burwell. Neuronal correlates in the rat retrosplenial cortex and the postrhinal cortex during performance on a visuospatial attention task. Program No. 329.15. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, Nov 5 2018.
- A. E. Ioannou, D. L. Poeta, R. D. Burwell, Control of perirhinal-dependent novelty exploration in rats by optogenetic modulation of prefrontal cortex. Program No. 329.16. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, Nov 5 2018.
84. D. L. Poeta, T. K. Jacobson, A. Ioannou, P. M. Kling, R. D. Burwell. A novel method for repeatable tap tests in a rodent model of hydrocephalus. Program No. 063.17. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, Nov 3 2018.
85. S. G. Trettel, I. Tomas Pereira, V. R. Heimer-McGinn, R. D. Burwell.
86. Characteristics and interactions in the local field potential of the perirhinal and postrhinal cortices. Program No. 329.14. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, Nov 5 2018.
87. V. J. Estela, R. D. Burwell, Characterizing representations in the postrhinal cortex during a location bi-conditional spatial memory task, Program No. 329.17. Neuroscience Meeting Planner. San Diego, CA, Society for Neuroscience, Nov 5 2018.
88. Long, N.M., Larson, V.C., Garnaat, L.S., Burwell, R., Jacobson, T., Philip, N.S., van't Wout-Frank, M. (2018). Learning not to avoid: preliminary data on the effects of transcranial direct current stimulation on learning and generalization to novel contexts. Annual Mind Brain Research Day, Brown University. March 27, 2018.
89. van 't Wout-Frank, M., Garnaat, S.L., Long, N.M., Larson, V.C, Philip, N.S., Jacobson, T., Burwell, R. Learning not to avoid: preliminary data on the effects of transcranial direct current stimulation on learning and generalization to novel contexts. Carolina Neurostimulation Conference, North Carolina. May 22, 2018.
90. S. G. Trettel, R. D. Burwell. Interactions in the local field potentials of the perirhinal and postrhinal cortices during memory and attention tasks. Program No. 335.08. Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, Oct 21 2019.
91. V. J. Estella, R. D. Burwell. A fully automated location bi-conditional spatial memory task using floor projection. Program No. 613.04. Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, Oct 22 2019.
92. E. Hwang, F.-C. Yang, R. D. Burwell. Local field potential and single cell encoding of the retrosplenial cortex during performance of a visuospatial attention task. Program No. 335.09. Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, Oct 21 2019.
93. T. B. Wise, R. D. Burwell, V. L. Templer. A novel approach to evaluating social distance processing in rats: Implications for understanding the posterior parietal cortex, Program No. 613.05. Neuroscience Meeting Planner. Chicago, IL, Society for Neuroscience, Oct 22 2019.

94. Faucher, C., Garnaat, S.L., Burwell, R., van 't Wout-Frank. Effects of transcranial Direct Current Stimulation on Avoidance Based Reversal Learning. Annual Mind Brain Research Day, Brown University. March 26, 2019. **Poster Award winner*
95. Faucher, C., Garnaat, S.L., Burwell, R., van 't Wout-Frank. Effects of transcranial Direct Current Stimulation on Avoidance Based Reversal Learning. VA Research Week, Providence VA Medical Center. May 17, 2019
96. F.-C. Yang, R. D. Burwell. The Role of the Pulvinar in Visuospatial Attention. Brown University Unconference, June 29, 2020.
97. X. Peng, D.L. Poeta, R. D. Burwell. Perirhinal and postrhinal cortices contribute to the configural process of contextual learning. Program No. P322.02. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, January 2021. Online.
98. T.B. Wise, V.L. Templer, R.D. Burwell. A matter of complexity? The role of the rodent posterior parietal cortex in processing spatial layouts. Program No. P303.03. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, January 2021. Online
99. F.-C. Yang, R. D. Burwell. Functional differentiation in the rat posterior parietal cortex: Implications for controlled and stimulus driven attention. Program No. P350.06. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, January 2021. Online.
100. X. Peng, D.L. Poeta, M. Slusarewicz, R. D. Burwell. Chemogenetic suppression of the perirhinal and postrhinal cortex impairs value inference in appetitive sensory
101. preconditioning. Program No. P725.07. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, November 2021. Online.
102. F.-C. Yang, R. D. Burwell. Pulvinar manipulation alters posterior parietal cortex activity during performance on a visuospatial attention task. Program No. P863.10. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, November 2021. Online.
103. T.B. Wise, D.L. Poeta, J.G. Lee, M.M Mazumder, R.D. Burwell. A comparison of DREADDs agonists using fear conditioning in a rodent model. Program No. P988.01. 2021 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, November 2021. Online
104. J.B. Zaltsman, R.D. Burwell, B.W. Connors. Synaptic properties of parallel corticothalamic pathways from postrhinal to pulvinar. Program No. 470.09. 2022 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, November 2022. Online
105. V. J. Estella, S.G. Trettel, R. D. Burwell. Novel oscillatory events in rodents during complex discrimination. Program No. 077.05. 2022 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, November 2022. Online

106. X. Peng, D.L. Poeta, R. D. Burwell. Perirhinal and postrhinal suppression leads to differential impairment in appetitive sensory conditioning. Program No. P492.05. 2022 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, November 2022. Online.
107. Mazumder, M.M., Wise, T.B., Burwell, R.D. Flexible social choice behavior in rats. International Comparative Conference on Cognition (Co3), Melbourne, FL. (April 2023).

Invited addresses and conferences

1. *Neuroanatomy of the Hippocampal System and Related Cortical Regions*. Invited address at Johns Hopkins University Department of Psychology, July 1997.
2. *Interactions Between Memory and Attention*. Invited to organize symposium for the Winter Conference on Learning and Memory, Park City, UT, January 13, 1998.
3. *Functions of Parallel Pathways in the Hippocampal System*. Spring Hippocampal Meeting, Grand Cayman, April 24, 1998.
4. *Information Processing in Parahippocampal Cortical Regions*. Washington State University Psychology Department, Pullman, WA, May 1, 1998.
5. *The Organization of Entorhinal, Perirhinal, and Parahippocampal Cortex in Rats, Monkeys, and Humans*. Tenth Annual Convention of the American Psychological Society, Washington, D.C., May 23, 1998.
6. *Parallel Corticohippocampal Pathways in the Rat*. Mount Sinai School of Medicine, Neurobiology of Aging Laboratories, New York, NY, July 23, 1998.
7. *Memory-related Brain Regions in the Mouse*. Cold Spring Harbor Course in Mouse Behavior, Cold Spring Harbor, New York, NY, December 8, 1998.
8. *Connectivity within the Parahippocampal Region*, A New York Academy of Sciences Conference on The Parahippocampal Region: Basic Science and Clinical Implications. Baltimore, MD, September 23-26, 1999.
9. Hippocampus Club Monthly Colloquium. *Topographic Patterns in the Intrinsic Pathways of the Hippocampus*, Boston University, November 16, 1999.
10. *Perirhinal and Postrhinal Contributions to Contextual Learning*, University of Connecticut at Storrs, March 16, 2000.
11. *Places and Spaces: Cortical Contributions to Memory*. Brown University, The Michael S. Goodman 1974 Memorial Lectures, February 20, 2002.
12. *Places and Spaces: Cortical Contributions to Memory*. UMASS-Boston, Biology Department Seminar Series. March 1, 2002.
13. *Parahippocampal Contributions to Memory*, Rutgers University, Neuroscience Seminar Series, March 4, 2002.

14. *Parahippocampal Regions: Bridging Memory and Attention*. Norwegian University of Science and Technology, Trondheim, Norway, Department of Neuroscience, June 2, 2003.
15. *Corticohippocampal Structure and Function*. University of Oslo, Norway, Center for Molecular Biology & Neuroscience and the Department of Anatomy, June 4, 2003.
16. *Rodent models of learning and memory: Dissociating cortical and hippocampal function*, Mayo Clinic, Alzheimer's Disease Research Colloquium, Jacksonville, FL, September 19, 2003.
17. *Corticohippocampal contributions to Spatial and Contextual Learning*. Brown University NSGP Proseminar. April 12, 2004.
18. *Animal models of Learning and Memory*, Duke University Medical School SIGN (Student Interest Group In Neuroscience), Durham, NC, May 10, 2004.
19. *Configural And Contextual Learning in the Parahippocampal Region*, Yale University Behavioral Neuroscience Seminar Series, October 12, 2004.
20. *Perirhinal Contributions to Contextual and Configural Learning*, Winter Conference on the Neurobiology of Learning and Memory, Park City Utah, January 7, 2005.
21. *Perirhinal Contributions to Contextual and Configural Learning*, Winter Conference on the Neural Plasticity, Guadeloupe, French Antilles February 19-26, 2005.
22. *Functional Neuroanatomy of the Parahippocampal Region*, Arizona University, Cognitive and Neural Systems Program, March 10, 2005.
23. *Configural and Contextual Learning in the Parahippocampal Region*, Johns Hopkins University Psychology Department Seminar Series, April 13, 2005.
24. *Parahippocampal Contributions to Attention*, John B. Pierce Laboratory and the Yale School of Medicine, September 13, 2005.
25. *What Does the Parahippocampal Region Do?* Laboratoire NAMC CNRS, Université Paris Sud, Orsay, France, October 13, 2005.
26. *Functional Neuroanatomy of the Hippocampal System in the Rat*. Center for Memory and Brain Speaker Series, Boston University Center for Learning and Memory, December 5, 2005.
27. *Corticohippocampal Circuits: Structure and Function*. Neuroscience Seminar Series, Princeton University. March 23, 2006.
28. *The Organization of the Hippocampal Connections with the Perirhinal, Postrhinal, and Entorhinal Cortices of the Rat*. Workshop on the Interactions between the Hippocampus and other Medial Temporal Lobe Structures, University College London, May 10-12, 2006.
29. *Organization of the Hippocampal Output to the Parahippocampal cortices*. Federation of

- European Neuroscience Societies, Forum 2006 Symposium: The parahippocampal cortex as an interface between hippocampus and neocortex. Vienna, Austria, July 10, 2006.
30. *Dual cortical systems bring information to the dentate gyrus (hippocampus) forming the basis of the medial and lateral perforant paths*, Workshop on Learning and Memory: Information Flow into Hippocampal Memory Stores, Marine Biology Laboratory, Woods Hole, August 3-4, 2006
 31. Co-organized the Winter Conference on the Neurobiology of Learning and Memory, 2007. Park City, Utah, January 4-7, 2007. <http://www.psych.utah.edu/wintconf/>
 32. *Context: What is it? Where is it? And how is it represented in the brain?* Co-organized session in the Winter Conference on the Neurobiology of Learning and Memory, 2007. Park City, Utah, January 4-7, 2007.
 33. *The Neural Bases of Memory and Attention*, Tougaloo College, Presentation to undergraduates interested in biomedical research, November 16, 2007.
 34. *Visuospatial Information Processing in the Rat*, Psychology Colloquium Series, Brown University, December 5, 2007.
 35. *Visual discrimination learning in rats: Parsing objects, scenes, and contexts*, Neuroscience In House Seminar Series, Brown University, January 28, 2008.
 36. *The Role of the Hippocampal System in Perception, Attention, and Memory*, NSGP Recruitment Weekend, by invitation of the graduate students, February, 2008.
 37. *Visual Information Processing in the Parahippocampal Region*, University of Arizona, Cognitive and Neural Systems Program, May 18, 2008.
 38. *Video games for rats: A new method for studying visuospatial information processing in rodents*, University of Cambridge, Behavioral Neuroscience Seminars, June 2, 2008.
 39. *Visual Information Processing in the Parahippocampal Region*, NSGP Retreat, by invitation of the graduate students, August 26, 2008.
 40. *Understanding visual information processing in the parahippocampal region*, Boston University, Center for Memory and Brain, December 12, 2008.
 41. *Attention and Memory in the Hippocampal System*, Galenea Corporation, Cambridge, MA, January 19, 2009.
 42. *Attention: the stuff that memory is made of*, Neuroscience In House Seminar Series, Brown University, February 3, 2009.
 43. *Visual and spatial information processing in the parahippocampal region*, NSGP Recruitment Weekend, by invitation of the graduate students, February 27, 2009.
 44. *Objects, Landmarks, and the Postrhinal Cortex*, University of Arizona, Evelyn F. McKnight Brain Institute University of Arizona, April 17, 2009.
 45. *Video games for rats: Understanding information processing in the parahippocampal region*, Brown University CLS Seminar Series, November 16, 2009.

46. *Two-Choice Discrimination in rats: Or, rats are smarter than you think*, Neuroscience In House Seminar Series, Brown University, February 23, 2010.
47. *Using the Floor Projection Maze: CinePlex Video Capture, Position Tracking, and Behavioral Analysis*, Plexon Technical Workshop and Training, March 23-25, 2010.
48. *In Vivo Optogenetics and Visuospatial Attention*, DARPA REPAIR Program Kick-Off Meeting, New Orleans, LA, April 25-27, 2010
49. *What does the retrosplenial cortex do? Invited commentator*, Boston University, Center for Memory and Brain, December 8, 2010.
50. "Optorodent" Research at Brown, DARPA REPAIR Meeting, Miami, FL, March 31-April 1, 2011.
51. *Optogenetics and Behavior: Studies in rats* DARPA NEST Meeting, Washington, DC, November 16-17, 2011.
52. Co-organized the Dave Olton Data Blitz Session at the Winter Conference on the Neurobiology of Learning and Memory, 2012. Park City, Utah, January 4-7, 2012.
53. *Integration of spatial and non-spatial information in the parahippocampal region*, Mt. Sinai School of Medicine, New York, NY, March 13, 2012.
54. *Optogenetic Modulation of Spontaneous Exploration of Novelty*, Functional Architecture of Memory Conference, Ruhr University, Bochum, GER, May 23-25, 2012.
55. *What does the Parahippocampal Cortex Do?* Center for Memory and Brain, Boston University, September 10, 2012.
56. *Bidirectional Modulation of Recognition Memory*. Department of Psychology, Dartmouth University, October 23, 2012.
57. *Explorations in the Neural Bases of Memory*. Keynote speaker, Scholarship Sewanee Undergraduate Research Day, Sewanee: The University of the South, April 26, 2013.
58. *The Hippocampus Differentiates between Landmarks and Objects*. Spring Hippocampal Research Conference Taormina Sicily Italy 2013. Taormina, Sicily, 9-14 June, 2013.
59. *Object and Context Representations in Parahippocampal structures*, 2nd Functional Architecture of Memory Conference, Ruhr University, Bochum, GER, May 21-23, 2014.
60. *Optogenetic Modulation of Recognition Memory*, American Psychological Association 2014 Convention, Aug. 7-10, 2014 in Washington, D.C.
61. *Explorations in the Neural Bases of Memory*. Keynote speaker, 4th Annual Women in Learning Luncheon and the APA convention. Washington, DC, August 8, 2014.
62. *Bidirectional Modulation of Recognition Memory*. Behavioral Neuroscience Seminar Series, University of Delaware, October 13, 2014.
63. *Perirhinal-postrhinal Interactions in the Representation of Context*. Spring Hippocampal

- Research Conference Taormina Sicily Italy 2015. Taormina, Sicily, 7-11 June, 2015.
64. *Conjunctive coding in the postrhinal cortex*. Memory Disorders Research Society Meeting,
 65. Cambridge University, 8-11 Sept, 2015.
 66. *An animal model to understand and treat normal pressure hydrocephalus*, BIBS Bench to Bedside Seminar on Disorders of the Cerebrospinal Fluid, April 10, 2016.
 67. *Context and the extinction of fear associations*, BIBS Bench to Bedside Seminar on Obsessive Compulsive Disorder (with Dr. Steven Rasmussen), April 28, 2016.
 68. *Cognition in CSF Disorders*. Chiari & Syringomyelia Foundation Think Tank Meeting, Chicago, IL, April 30, 2016.
 69. .
 70. *Perirhinal and postrhinal interactions in the representation of context*, 3rd Functional Architecture of Memory Conference, Leibniz Institute for Neurobiology, Magdeburg, GER, May 25-27, 2016.
 71. *A rodent model of normal pressure hydrocephalus*, private meeting with donor prior to the Symposium on Disorders of the Cerebrospinal Fluid, Rhode Island Hospital, June 24, 2016.
 72. *Brain oscillations and the assessment of cognitive function*, Symposium on Disorders of the Cerebrospinal Fluid, Rhode Island Hospital, June 25, 2016.
 73. *Circuit analysis of parahippocampal function*. NYU Conference on Frontiers in the Science of Memory. Florence, Italy, June 27-30, 2016.
 74. *Memory deficits in an animal model of normal pressure hydrocephalus*. Memory Disorders Research Society Annual Meeting, Princeton NJ, September 29-30, 2016.
 75. *Circuit analysis of posterior parietal function*. Krasnow Institute Seminar Series. George Mason University. Fairfax, VA, November 21, 2016.
 76. *Co-organized the 41st Winter Conference on the Neurobiology of Learning and Memory, 2016. Park City, Utah, January 5-8, 2017.*
 77. *Organized the David Olton Data Blitz Session at the 41st Winter Conference on the Neurobiology of Learning and Memory, 2016. Park City, Utah, January 5, 2017.*
 78. *Investigating the Neural Bases of Memory*, Keynote speaker for the annual SfN Chapter Conference in at the University of Florida. Invited by graduate students, March 17, 2017
 79. *Invited panelist for a professional development session open to scientists at all career stages of their careers*. Annual SfN Chapter Conference in at the University of Florida. Invited by graduate students, March 17, 2017
 80. *Study in cognition in a diseased animal model”, 2nd Annual CSF Disorders Symposium at the Warren Alpert Medical School of Brown University on “Chiari and Cognition”. June, 2017.*

81. *Investigating the Neural Correlates of Memory in Behaving Animals*, Warren Alpert Medical School of Brown University, Department of Neurology Grand Rounds, Sept. 20, 2017.
82. *Context and Memory. Session on Tribute to Howard Eichenbaum*. Memory Disorders Research Society Meeting, Northwestern University, Sept 15, 2017. *Declined*.
83. *Objects and locations: The neural circuitry of spatial context*, a symposium that will recognize and honor the scientific contributions of the late Dr. Howard Eichenbaum, Boston University, March 23, 2018.
84. *Objects and locations: The neural circuitry of spatial context*. West Virginia University, Neuroscience Institute, Morgantown, WV, April 4, 2018.
85. *Perirhinal and postrhinal interactions and representations of context*, symposium entitled "Rethinking content-based parcellation of the medial temporal lobe." 2018 International Conference on Learning and Memory in April 2018, UC Irvine. (unable to attend for personal reasons, so postdoc delivered talk)
86. *Objects, Contexts, and the Medial Temporal Lobe*, Pavlovian Society annual meeting, The University of Iowa, Iowa City, October 4-6, 2018.
87. *The neural bases of spatial context: Beyond the hippocampus*. Brown NSGP-GPP Graduate Program Retreat, MBL, Woods Hole, MA. Invited by graduate students. October 17, 2018.
88. *The neural bases of spatial context: Beyond the hippocampus*. Leaton Lecture in Behavioral Neuroscience at Dartmouth College for Academic Year 2018-19.
89. "Perirhinal and postrhinal interactions and representations of context" as a part of in symposium entitled "Rethinking content-based parcellation of the medial temporal lobe." Winter Conference On Neuroplasticity, February 9-16, 2019 – Moorea, French Polynesia
90. *My Science Journey*. Neuroscience Graduate Program Student Retreat, Marine Biological Laboratories, Woods Hole, MA, Oct 7, 2019.
91. *The role of the pulvinar in visuospatial attention*. Norwegian University of Science and Technology, Trondheim, Norway, Department of Neuroscience, Dec 12, 2019.
92. *Bidirectional Modulation of Recognition Memory: Evidence for a new type of temporal code*. Memory Disorders Research Society 30th Anniversary Meeting, New York City, NY, Oct 4, 2020 [CANCELLED]
93. *Attention and the retrosplenial cortex*, Pavlovian Society Annual Meeting, Virtual, September 10, 2020.
94. *Attentional Alpha in the Rodent Brain*, Memory Disorders Research Society 31st Anniversary Meeting, Online, Oct 4, 2021

95. Attentional Alpha in the Rodent Brain, Winter Conference on the Neurobiology of Learning and Memory, Park City, UT, January 6-9, 2022.
96. Postrhinal Cortex, Non-spatial Context, and Occasion Setting, University of Vermont, Department of Psychology, Fall, November 4, 2022

Service:

Department

Interdepartmental Advisory Committee, 2000-2001
 Interdepartmental Curriculum Committee, 2000-present
 Faculty search committee, 2001-2002
 Affirmative Action Representative, two faculty search committees 2002-2003
 Honors Program committee, 1997-2000
 Colloquium committee, 2000-2001
 Whalen Award Committee, 1997-2001
 Library Representative, 2000-2007
 Computer committee, 1999- 2002
 Ad hoc committee to examine the merits of joint Psychiatry/Psychology appointments, 2003-2004.
 NSGP Journal Club sponsor, 2001-2003
 Psychology Director of Graduate Studies, January 2004-2005, 2006-2008
 NSGP Admissions Committee for 2007 Admissions
 Cognitive Neuroscience Search Committee, 2006-2007
 Human Neuroscience Search Committee, 2006-2007
 Organized Matlab courses for Neuroscience, CLS, and Psychology students, January 22-23, 2007.
 Human Memory Search Committee, 2007-2008
 CLiPS Graduate Education Committee, 2008
 Human Memory Search Committee, 2008-2009
 Neuroscience Graduate Program Seminar (NSGP) Seminar Series Committee, 2001-present
 CLiPS Governance Committee, 2009
 Promotion to Associate committee, Academic year 2009-2010
 Promotion to Associate committee, Chair, Academic year 2010-2011
 Graduate Diversity Recruitment Coordinator for CLPS and NSGP, 2009-2012.
 CLPS Strategic Planning Committee, 2011-present
 Social Psych Search Committee, 2014-2015, member and affirmative action representative
 Neuroscience Graduate Program (NSGP) Admissions Committee, 2015
 Promotion to Professor committee, Chair, 2015-2016
 Acting Departmental DIAP leader, Fall 2017
 Neuroscience Graduate Program (NSGP) Admissions Committee, 2018-2019
 Neuroscience Graduate Program (NSGP) Seminar Committee, 2018-2019
 Promotion to Professor committee, Chair, 2018-2019
 Promotion to Associate Professor, Chair, 2019-2020
 Departmental DIAP leader, Fall 2018-2019
 Promotion to Associate committee, Chair, 2021-2022
 Department Chair, 7/1/2019-6/30/2022
 Departmental DIAP Co-Chair, Fall 2022-Spring 2023

Dev/BN Search Committee, member and DIAP representative, 2022-2023

University

College Curriculum Council, 1999-2002
Faculty Fellow Program, 1997-1999
Freshman Orientation: Skin Deep facilitator, 2000
Focus group on advising for University Committee on Advising, 1999
Neuroscience Mentoring Program, 1998-2001
Independent Concentration Committee, 1999-2005
OVPR Seed Grant Committee, Spring 2009
ADVANCE Faculty Mentoring Program, 2009-2011.
OVPR Strategic Planning Committee: Recommendations to Support the Conduct of Research Committee, 2009-2010
ACF Faculty User's Committee, 2007-2012
First Readings Advisor, 2010, 2011, 2012
Freshman Advisor, 1997-2003, 2011-2012
Sophomore Advisor, 1998-1999, 2012-2013
Research Environment Risk Assessment Committee, 07/2008-2014.
Brown-Tougaloo Programs Campus Advisory Committee, 2006-2014
Academic Priorities Committee, member 2006-2009, Vice Chair, 2008-2009
IACUC Committee, 2007-2014, Chair since July 2008-2014
Brown Mentoring Program, mentor for Assistant Professor, Department of Chemistry, 2013-2014
Academic Priorities Committee, member 2012-2015, Vice Chair, 2014-2015
Grievance Committee, alternate, 9/1/2015-6/30/18 (alternate serves when anyone on committee is in conflict)
Provost's Agenda committee for the Chairs and Director's monthly meetings, 2019-2021
Animal Care Governance Committee (OVPR Office), member, 2018-2023

Professional

NIH IFCN7 Grant Review Panel – temporary member, June 2002.
NIH IFCN5 Grant Review Panel – temporary member, March 2003.
NIH Neurobiology of Learning and Memory Study Section, Center for Scientific Review (LAM, formerly IFCN7), permanent member, 07/2003-06/2007.
NIH ZRG1-IFCN-B-04M Study Section, Center for Scientific Review, temporary member, 2007.
NSF Science of Learning Centers, ad hoc site review panel, 01/2004.
ZNS1 SRB-M Special Emphasis Panel/Scientific Review Group, July 2008.
American Psychological Association, Selection Committee for the Young Investigator Award in Cognitive Neuroscience, Chair, 2008
Texas A&M University and Texas A&M Health Science Center, Faculty of Neuroscience, External Review Committee, 2008.
External Advisory Committee for an NIMH Silvio Conte Center on Cognitive and Physiological Studies of Episodic Memory. Boston University, 2008-13.
National Science Foundation, grant reviewer, 1999-present.
Alzheimer Association Research Grants Program, reviewer, 2005-2009.
NIMH, Special Emphasis Panel, Comparative Interdisciplinary Studies of Cerebral Cortical Development, Center for Scientific Review, February 2009.
NIMH RFA 09-080 Grant Review Panel – temporary member, March 2009

NIH ZRG1 F02A Grant Review Panel – temporary member, May 2010
IAR Reviewer Invitation for NIH ZRG1 IFCN-L (02) Member Conflict panel, temporary member, October 2010
Biotechnology and Biological Sciences Research Council (BBSRC), UKs leading funding agency, ad hoc reviewer, ongoing.
NSF Site Visitor, Review of the Center of Excellence for Learning in Education, Science and Technology (CELEST), Boston, MA, 2011.
NSF Site Visitor, Review of the Center of Excellence for Learning in Education, Science and Technology (CELEST), Boston, MA, 2012.
COBRE Junior Faculty Mentor, 2012- 2014
NSF Review Panel: Neural CAREER Full Proposal Panel Fall FY14, October 2013
Incoming Editor-in-Chief, Behavioral Neuroscience, starting January 1, 2014-December 31, 2014 (my editorial team began handling all new submissions)
NIGMS Special Emphasis Panel ZGM1 PPBC-4, November 2015
Professional Development Symposium, panelist. Annual SfN Chapter Conference in at the University of Florida. Invited by graduate students, March 17, 2017
Barnard College Program in Neuroscience External Review Committee, October 2018.
Advisory Board. NIH P01 Project "Development and Neurobiology of Categorization." PI: Vladimir Sloutsky (The Ohio State University), Co-PIs: Edward Wasserman and John Freeman (University of Iowa) and Bradley Love (University College-London), 2018-2020.
Editor-in-Chief, Behavioral Neuroscience, starting January 1, 2015-December 31, 2020
American Psychological Association Council of Editors, 2014-2020
DECLINED Royal Irish Academy invitation to act as external assessor to 2021 Academy Gold Medal in the Social Sciences
External Advisory Committee and member of administrative core for the Centers of Biomedical Research Excellence (COBRE) Phase I grant awarded to the Department of Psychological Sciences at Kansas State University, PI Kim Kirkpatrick, 2017-2022.
Internal Advisory Committee for the COBRE Center for Central Nervous System Function Phase I and Phase 2 grant awarded to Brown University, PI Jerome Sanes 2017-present.
Internal Advisory Committee for the COBRE Center for Neuromodulation Phase I grant awarded to Brown University, PI Ben Greenberg, 2019-present.
Editorial Board, Hippocampus, 2003-present.
Reviewing Editor, Frontiers in Neuroanatomy, 2007-present, (asked to be Associate Editor in 2020 but declined because of other editing responsibilities).
Consulting Editor, Behavioral Neuroscience, 2009-2014, 2021-present
Academic Editor, Editorial Board, Vision, 2020-present.
Reviewing Editor, Frontiers in Behavioral Neuroscience, 2022-present

Community

Undergraduate Research and Creative Activities Program, Mentor, 1993-1996
Minorities Highschool Student Research Apprenticeship Program, Mentor, 1995
High School Student Short Course, Society for Neuroscience Annual Meetings, Mentor, 1996
NIH USGP (Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds) Mentor, 2001-2003
Brown Tougaloo Brain Behavior Summer Research Program, 2006-2018
Leadership Alliance Trainer, Summer 2008
Supervised senior project field work of North Kingston high school student, Matt Gowell, February, 2010.
BP-ENDURE (Blueprint Program for Enhancing Neuroscience Diversity through

Undergraduate Research Education Experiences Trainer, Summer 2011
Supervised summer research rotation of high school student, Skye Kevelson, from Science Research Program at Choate Rosemary Hall in Wallingford, CT, Summer 2011.
Gave two research/recruitment talks at Dillard University and Xavier University in New Orleans, two historically black universities, October 2012.
Center for Vision Research 5th Anniversary Celebration — art+science PERCEPTION, participant.
Hosted student from Dillard University, a historically black university in New Orleans, LA, Summer 2013.
Hosted student from Xavier University, a historically black university in New Orleans, LA, Summer 2014.
Hosted student from Tougaloo College, a historically black college in Jackson, MS, Summer 2015.
Brain Week, Rhode Island (BWRI). Each year in March, my laboratory participates with BWRI celebrates international Brain Awareness Week. The goal is to increase public awareness of advancements resulting from brain research. My lab participates in the festivities and organizes events geared toward K-12 schools.2016-present.

Rebecca Burwell, Ph.D.
Mentoring Curriculum Vitae

Mentoring Statement

It is increasingly clear that neuroscientists at all levels benefit from mentoring and from training in effective mentoring. I have a longstanding interest in mentoring at all levels, including junior faculty at my institution and outside Brown as well as students from disadvantaged and underrepresented groups. In addition to mentoring undergraduates, graduate students, and postdocs, I have mentored a number of junior female faculty through both the COBRE and INBRE mechanisms as well as through Brown University's Junior Faculty Mentoring Program.

My commitment to my students is provide a safe and inclusive environment, to train them in rigorous research procedures and responsible conduct in research, and to enhance professional development suitable for each student's goals. For mentees at all levels, I consider my commitment to be of long duration. I make myself available for mentoring, support, and professional development for my students and mentees through the next phases of their career. For an academic research career, for example, my commitment would be at least until the mentee or former student is tenured.

I am particularly interested in involving graduate and undergraduate students belonging to groups that are underrepresented in neuroscience and psychology research. My laboratory periodically hosts summer undergraduates from historically black colleges and universities, including Tougaloo College in Jackson MS and Xavier and Dillard Universities in New Orleans LA. In the summers, we have hosted 12 rotation students from HBCUs and through Leadership Alliance as well as BP-Endure. Brown University provides an excellent setting for meeting these educational goals through its strong commitment to undergraduate education and to diversity and inclusion. During my time so far at Brown, 71 Brown undergraduates were trained in research in my laboratory. More than half belonged to demographic groups that are underrepresented in neuroscience. Twenty-nine completed honors theses under my mentorship, and many have received authorship on publications and abstracts. Many have gone on to post-baccalaureate studies. My strategy is to bring students into the lab early in their college careers, at least by the summer before the junior year. That way, students have the time to learn techniques and to gain the intellectual background necessary to complete high-quality research. My commitment to these students is to be available to support their careers as long as necessary. This can be through providing letters of recommendation or advice and support as necessary.

As former chair of my department, I also have a strong commitment to building diversity and inclusion in our own ranks. In some ways, this can feel like an uphill battle, but it is a challenge we must face head on with all the courage we can muster.

Mentoring and Advising Service

Undergraduate Research and Creative Activities Program, Mentor, SUNY-SB, 1993-1996.
Minorities Highschool Student Research Apprenticeship Program, Mentor, SUNY-SB, 1995.
High School Student Short Course, Society for Neuroscience Annual Meetings, Mentor, 1996.
Interdepartmental Curriculum Committee, 2000-2002
Independent Concentration Committee, 1999-present
Sophomore Advisor, 1998-present
Freshman Advisor, 1997-2003
Faculty Fellow Program, 1997-1999

Freshman Orientation: Skin Deep facilitator, 2000
 Focus group on advising for University Committee on Advising, 1999
 NIH USGP (Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds) Mentor, 2001-2003
 Brown-Tougaloo Campus Advisory Committee, 2006-2014
 Brown Junior Faculty Mentoring Program Mentor, 2011-2014
 Cognitive Neuroscience Concentration Advisor (Head), 2019-2021
 Junior faculty mentor for multiple COBRE and INBRE Grants: 2010-present
 COBRE Advisory Council: Cognitive and Neurobiological Approaches to Plasticity Center, Kansas State University

Undergraduate Research Advisees:

1. Chiyo Aoshima, Brown psychology Honors student, 1996-1997
2. Graciela Bauza, Brown neuroscience independent study student, 1996-1997
3. Sandipan Bagchi, Brown neuroscience UTRA student, Summer 1997
4. Gidon Felsen, Brown neuroscience UTRA student, Summer 1997; honors student, 1997-1998
5. Michael O'Malley, Brown physics concentrator, work study student and collaborator, 1997-1998
6. Joshua Rolnick, Brown cognitive neuroscience Honors student, 1998-2000; UTRA 1998
7. Michael Sadoris, Brown cognitive neuroscience Honors student, 1998-1999
8. Jaimie Kane, Brown psychology Honors student, 1998-1999
9. Danella Hafeman, Brown neuroscience Honors student, 1999-2000; UTRA 1999
10. Vanessa Williams, Brown undergraduate NSF summer fellow, 1999
11. Bridget Dolan, Brown undergraduate Honors student, Biology, graduated May 2001.
12. Chia Haddad, Brown undergraduate Honors student, Neuroscience, graduated May 2001.
13. Matthew Sanborn, Brown undergraduate Honors student, Neuroscience, graduated May 2001.
14. Alyssa Letourneau, Brown undergraduate Honors student, Neuroscience, graduated May 2001.
15. Megan Kocher, Odyssey student, Summer 2002;
16. Kathryn Demos, Odyssey student, Summer 2002;
17. Erica Woodland, Brown undergraduate NSF summer fellow, 1999, 2000, 2001; Brown psychology Honors student, 2001-2002
18. Emily Davies, Brown neuroscience UTRA student, Summer 2001; research rotation, 2001-2002; Honors student, 2003, Whalen Award for Excellence in Undergraduate Research in Brain and Behavior, graduated May 2003
19. Hannah Klein, Odyssey student, Summer 2001; NIH USGP mentoree; Brown Neuroscience undergraduate independent study student, graduated May 2003
20. Mike Jutras, Brown undergraduate Neuroscience Honors student, 2002-2003, Whalen Award for Excellence in Undergraduate Research in Brain and Behavior, graduated May 2003
21. Joe Sills, Brown Neuroscience undergraduate independent study student, UTRA student, 2002-present
22. Nataniel Lester-Coll, UTRA student, summer 2003
23. Sanford Brown, Brown Neuroscience undergraduate independent study student and summer research student, 2003-2005
24. Sashin Shah, Brown Neuroscience undergraduate independent study student and summer research student, 2003-2004
25. Blake Gurfein, 2004, Neuroscience undergraduate independent study student.

26. Ashley Bear, Brown Neuroscience undergraduate independent study student, 2004-2005
27. Mike Ferguson, Brown Neuroscience undergraduate independent study student, UTRA student, Summer 2004-2005.
28. Sean Rumschik, Brown Neuroscience undergraduate independent study student, Fall 2004-Spring 2006, Neuroscience Honors student.
29. Lynn Mubita, Brown Neuroscience undergraduate lab member, Independent Study Student, Fall 2004-2007,
30. Kimberly Casten, Brown Neuroscience undergraduate lab member, Fall 2004-Spring 2008, UTRA student in Summers 2006 and 2007, Neuroscience Honors Student graduated May 2008
31. Christine Cho, Brown Neuroscience undergraduate lab member, Fall 2005-Spring 2008, UTRA student in Summer 2006, Neuroscience Honors Student, graduated May 2008
32. Francesca Santiago, Brown Neuroscience undergraduate lab member, 2007-2008
33. Talha Anwar, Brown Neuroscience undergraduate lab member, 2007-2008
34. Akash Kumar, Brown Neuroscience, Independent study advisor, lab member since Spring 2006, UTRA student in Summer, 2008, Fall 2008 and Spring 2009
35. Adrienne Umali, Brown Neuroscience undergraduate lab member, Fall 2007-present
36. Samantha Scudder, Brown Neuroscience undergraduate, Summer UTRA 2008, lab member, honors student, 2008-2010
37. Arune Gulati, Brown Neuroscience undergraduate lab member, Fall 2007-2011, winner of the James McIlwain Neuroscience Award
38. Elizabeth Phillips, Brown Neuroscience undergraduate, Summer UTRA 2008, lab member, honors student 2008-2011
39. Catherine Wilson, Brown Neuroscience undergraduate, lab member, honors student 2009-2012
40. Rohan Ramesh, Brown Neuroscience undergraduate, lab member, honors student 2009-2012, winner of Neuroscience Department Prize
41. James Stomber, Brown Neuroscience undergraduate, lab member, 2012-2013
42. Clay Aldern, Brown Neuroscience undergraduate, lab member, honors student, 2011-2013, awarded Rhodes scholarship
43. Ananya Anand, Brown Neuroscience undergraduate, lab member, honors student, 2012-2013
44. Amanda Liu, Brown Neuroscience undergraduate, lab member, 2010-2014
45. Vishesh Jain, Brown Neuroscience undergraduate, lab member, 2013-2014
46. Krishan Aghi, Brown Neuroscience and Applied Math undergraduate, lab member and honors student, 2012-2015
47. Jackie Phillips, Cognitive Neuroscience undergraduate, honors student, 2014-2016
48. Methma Udawatta, Brown Neuroscience undergraduate, lab member and honors student, 2014-2016
49. Ben Shanahan, Brown Neuroscience undergraduate, lab member, 2014-present
50. Meghan Gonsalves, Brown Neuroscience undergraduate, lab member, 2014-2015
51. Hayley Bounds, Brown Neuroscience undergraduate, lab member, 2015-present
52. Sasha Lieblin, Brown Neuroscience undergraduate, lab member, 2015-present
53. Liane Cho, Brown Neuroscience undergraduate, lab member, 2015-2016
54. Kevin Li, Brown Neuroscience undergraduate, lab member, 2015-present
55. Janet Wanjiku, Brown CLPS undergraduate, lab member, 2015-2016
56. Jackie Phillips, Cognitive Neuroscience undergraduate, honors student, 2014-2016
57. Meghan Gonsalves, Brown Neuroscience undergraduate, lab member, 2014-2015
58. Methma Udawatta, Brown Neuroscience undergraduate, lab member and honors student, 2014-2016
59. Sasha Lieblin, Brown Neuroscience undergraduate, lab member, 2015-2016

60. Ben Shanahan, Brown Neuroscience undergraduate, lab member, 2014-2018
61. Kevin Li, Brown Neuroscience undergraduate, lab member, 2015-2017
62. Chandler Werthman, Brown Neuroscience undergraduate, lab member, 2015-2017
63. Hayley Bounds, Brown Neuroscience undergraduate, lab member and honors student, 2015-2017, winner Whalen Award and the Neuroscience Donoghue Prize
64. Amrita (Maya) Singh, Contemplative studies undergraduate, 2016-2019
65. Will McNelis, Brown Neuroscience undergraduate, 2017-2020
66. Ishan Sahoo, Brown Neuroscience undergraduate, 2017-2020
67. Harrison Tran, Brown Neuroscience undergraduate, 2017-2020
68. Jesse Otega, CLPS undergraduate, 2020-2021
69. Megan Slusarewitz, Neuroscience Undergraduate, Summer 2021
70. Maya Mazumder, CLPS undergraduate, 2020-2023
71. Jasmine Lee, Neuroscience Undergraduate, 2021-2023
72. Isabella Pilkington, UVM undergraduate, Summer 2023 Research Assistant
73. Yamilet Nieves Vega, PC undergraduate, Summer 2023 Research Assistant
74. Jose Alberto Pena, PC undergraduate, Summer 2023 Research Assistant
75. Laura G Betances, PC undergraduate, Summer 2023 Research Assistant

Undergraduate Honors Theses advised:

1. Aoshima, Chiyo. (1997). The role of the postrhinal cortex in visuospatial attention. Psychology.
2. Felsen, Gidon (1998). The role of the perirhinal cortex in the formation of configural Associations. Neuroscience.
3. Kane, Jaimie. (1999). Contribution of the postrhinal cortex in covert orienting of attention in the rat. Psychology.
4. Saddoris, Michael P. (1999) Polymodal sensory cues, but not time of day, promote contextual discrimination in rats. Cognitive Neuroscience.
5. Hafeman, Danella. (2000). Spatial firing of cells in rat postrhinal cortex. Neuroscience.
6. Rolnick, Joshua A. (2000) The effect of unilateral postrhinal lesions on hippocampal place cells. Cognitive Neuroscience.
7. Letourneau, Alyssa. (2001) Postrhinal involvement in hippocampal place field activity. Neuroscience.
8. Haddad, Chia. (2001) Corticohippocampal circuitry of the mouse. Neuroscience.
9. Sanborn, Matthew. (2001) The time-dependent role of postrhinal and perirhinal cortex in contextual fear conditioning. Neuroscience.
10. Woodland, Erica. (2002) C/EBP and memory. Psychology.
11. Davies, Emily. (2003). The role of the parahippocampal region in configural learning and memory. Neuroscience.
12. Jutras, Michael. (2003). A behavioral analysis of the connexin36 knockout mouse. Neuroscience.
13. Sills, Joseph. (2005). An Electrophysiological and Morphological Study of Neurons in Layer V of Postrhinal Cortex. Neuroscience.
14. Rumschik, Sean. (2006). Comparative Morphology of the Perforant Pathway in Three Mouse Strains
15. Kimberly Casten, Brown Neuroscience undergraduate lab member, Fall 2004-Spring 2008, UTRA student in Summers 2006 and 2007, Neuroscience Honors Student graduated May 2008
16. Christine Cho, Brown Neuroscience undergraduate lab member, Fall 2005-Spring 2008, UTRA student in Summer 2006, Neuroscience Honors Student, graduated May 2008

17. Samantha Scudder, Brown Neuroscience undergraduate, Summer UTRA 2008, lab member, honors student, 2008-2010.
18. Arune Gulati, Brown Neuroscience undergraduate lab member, Fall 2007-2011, winner of the James McIlwain Neuroscience Award
19. Elizabeth Phillips, Brown Neuroscience undergraduate, Summer UTRA 2008, lab member, honors student 2008-2011
20. Catherine Wilson, Brown Neuroscience undergraduate, lab member, honors student 2009-2012
21. Rohan Ramesh, Brown Neuroscience undergraduate, lab member, honors student 2009-2012, winner of Neuroscience Department Prize
22. Clay Aldern, Brown Neuroscience undergraduate, lab member, honors student, 2011-2013, awarded Rhodes scholarship
23. Ananya Anand, Brown Neuroscience undergraduate, lab member, honors student, 2012-2013
24. Amanda Liu, Brown Neuroscience undergraduate, lab member, 2010-2014. Honors.
25. Krishan Aghi, Brown Neuroscience and Applied Math undergraduate, lab member and honors student, 2012-2015
26. Jackie Phillips, Cognitive Neuroscience undergraduate, honors student, 2014-2016
27. Methma Udawatta, Brown Neuroscience undergraduate, lab member and honors student, 2014-2016, The Role of Perirhinal and Postrhinal Interaction in Contextual Memory
28. Hayley Bounds, Brown Neuroscience undergraduate, lab member, 2015-2019. Development of an Automated Gait Analysis System and its Use in Assessing Cognitive and Motor Deficits in a Rat Model of Normal Pressure Hydrocephalus
29. Will McNelis, Brown Neuroscience undergraduate, 2017-2020, An Investigation into the Connectivity of the Perirhinal Cortex, Postrhinal Cortex and Hippocampus
30. Maya Mazumder, CLPS Cognitive Neuroscience undergraduate, 2020-2023, Exploring Flexible Social Decision-Making in Rats with a New Behavioral Paradigm

Summer research advising of minority and underrepresented individuals

1. Marshala Lee, Tougaloo College, Jackson, MS, *funded by NSF Award to Burwell*, summer research rotation, 2006
2. Erica McInnis, Tougaloo College, Jackson, MS, *funded by NSF Award to Burwell*, summer research rotation, 2006
3. Janelle Alleyne, Tougaloo College, Jackson, MS, *funded by NSF Award to Burwell*, summer research rotation, 2007
4. Yolanda Patterson, Tougaloo College, Jackson, MS, *funded by NSF Award to Burwell*, summer research rotation, 2007
5. Marla Washington, Tougaloo College, Jackson, MS, *funded by NSF Award to Burwell*, summer research rotation, 2008
6. Sofia Beas, UT El Paso, *Leadership Alliance Student*, summer research rotation, 2008
7. Saima Machlovi, Hunter College, New York, *BP-ENDURE Student*, summer research rotation, 2011
8. Frank Kuoadio, Dillard University, New Orleans LA, *funded by NSF Award to Burwell*, summer research rotation, 2013
9. Kwame Jackson, Xavier University, New Orleans LA, *funded by NSF Award to Burwell*, summer research rotation, 2014
10. Amanda Dortch, Tougaloo College, *funded by NSF Award to Burwell*, summer research rotation, 2015
11. Alejandra Patino, NYU, *funded by BP-Endure*, summer research rotation, 2018.
12. Carmilya Jackson, Tougaloo College, *funded by NSF Award to Burwell*, summer research

rotation, 2018.

Graduate Student Primary Advising

1. Anna Pflaster Beaudin, Psychology Graduate Program Masters student, 2001-2003. Currently Associate Professor at University of Utah School of Medicine.
2. Kara Agster Saddoris, Neuroscience Graduate Program graduate student, 2001-2007, Currently a Senior Research Associate in Psychology and Neuroscience and the University of Colorado, Boulder.
3. Lisa Dokovna, Psychology Graduate Program, Masters student, 2012-2013, Currently a Ph.D. student in the University of Southern California Department of Cell and Neurobiology
4. Kristen Kerr Scaplen, Neuroscience Graduate Program, Ph.D. student, 2006-2013. Currently an Assistant Professor at Bryant University.
5. Devon Poeta, Biotechnology Masters student, 2013-2015. Currently a Research Associate in CLPS at Brown University.
6. Bailey Willis, Biotechnology Masters student, 2014-2015. Currently a Global Studies Associate at Genentech.
7. Brendon Kent, Psychology Graduate Program, Ph.D. student, 2010-2015. Currently a Consultant in the DC area.
8. Fang-Chi Yang, Psychology Graduate Program, Ph.D. student, advisor, 2010-2016. Back at Brown as a postdoctoral research associate.
9. Eunkyung Hwang, Psychology Graduate Program, Ph.D. student, 2014-2020. At the Korean version of NIMH.
10. Valerie Estela, Neuroscience Graduate Program, Ph.D. student, 2015-2020. Postdoctoral Fellow at Children's Hospital of Philadelphia.
11. Alexia Ioannou, Biomedical Engineering, MS. student, 2017-2019. Engineer in a startup.
12. Taylor Wise, Psychology Graduate Program, graduate student, advisor, 2018-present
13. Julia Zaltsman, Neuroscience Graduate Program, graduate student, co-advisor, 2018-present
14. Xiangyuan Peng, Psychology Graduate Program, graduate student, advisor, 2019-2023

Graduate Student Committees, Rotations, and Secondary Advising

1. Paulo Guilhardi, Brown Psychology graduate student, dissertation committee, 2003-2005
2. Steven Taubenfeld, MD-PhD/NSGP graduate student, dissertation committee, 2003-2006
3. Jonathan Whitlock, NSGP graduate student, dissertation committee, 2001-2006
4. Thomas Templin, Brown Psychology graduate student, dissertation committee, 2002-2006
5. Jennifer Gench, Neuroscience graduate student, first year advisory committee, 2006
6. Carolyn Graybiel, Neuroscience graduate student, first year advisory committee, 2006
7. Lynelle Corellini, Psychology graduate student, first year project committee, 2006
8. Charles King, Psychology graduate student, first year project committee, 2006
9. Jay Liu, Psychology graduate student, first year project committee, 2006
10. Nellwyn Hagan, Neuroscience Graduate Program, rotation student, Fall 2006
11. Cole Graydon, Neuroscience Graduate Program, rotation student, Fall 2006
12. Shau-Ming Wei, Psychology Graduate Program, first year project advisor, 2006-2007
13. Kristen Kerr, Neuroscience Graduate Program, rotation student, Fall 2006
14. Shau-Ming Wei, Neuroscience graduate student, prelim committee, 2007-2008
15. Emily Stackpole, Neuroscience graduate student, first year advisory committee, 2008-

2009

16. Omar Ahmed, Neuroscience Graduate Program, dissertation committee, 2006-2009
17. Sarah Burke, Arizona Psychology graduate student, dissertation committee, 2005-2009
18. Jon Ericson, CogSci Graduate Program, graduate student, first year project committee, 2007-2008, lab rotation advisor, Fall 2008, prelim committee, 2009.
19. Jennifer Barredo, Neuroscience Graduate Program, graduate student, advisor, 2007-2009, prelim committee, 2009, dissertation committee, 2014
20. James Niemeyer, Neuroscience Graduate Program, rotation student, Fall 2009
21. Jackie Hynes, Neuroscience Graduate Program, rotation student, Fall 2009
22. David Valenzuela, Neuroscience Graduate Program, prelim committee, 2009, dissertation committee, 2010-2011.
23. Geoffrey Chew, MPPB Graduate Program, prelim committee, 2006-2010
24. Erika Alexander, Psychology Graduate Program, graduate student, first year project committee, 2008-2009; prelim committee, 2010-2011
25. Garrett Neske, Neuroscience Graduate Program, rotation student, Fall 2011
26. Carolyn Graybiel, Neuroscience GPP grad student, prelim/dissertation committee, 2007-2011
27. David Freestone, Psychology Graduate Program, prelim/dissertation committee, 2009-2012.
28. Jing Yang, Physics Graduate Program, dissertation committee, 2010-2012
29. Liz Chasril, CogSci Graduate Program, dissertation prelim committee, 2008-2012
30. Katie Kalafut, Psychology graduate student, prelim/dissertation committees, 2011-2014
31. Jason Scimeca, Cognitive Science graduate student, prelim committee, 2012-2013
32. Jon Ericson, Cognitive Science graduate student, FYP/prelim/dissertation committees, 2008-2013
33. Jon Rueckemann, Psychology graduate student, Boston University, dissertation committee, 2010-2013
34. Shau-Ming Wei, Neuroscience Graduate Program, prelim/dissertation committees 2009-2013
35. Jennifer Barredo, Neuroscience Graduate Program, prelim/dissertation committees 2009-2013
36. Reyna Carter, Neuroscience graduate student, prelim/dissertation committees, 2010-2013
37. Lauren Dobsen, Neuroscience Graduate Program, rotation student, Spring and Summer 2009; prelim and dissertation committees, 2010-2015
38. Scott Herrick, Neuroscience Graduate Program, prelim/dissertation committees, 2010-2015
39. Gabriela Manzano, Neuroscience Graduate Program, prelim/dissertation committees, advisor: Kevin Bath, 2015-2020
40. Jeff Mercurio, PhD student in Neuroscience GPP, Brown University, Prelim Committee, 2019-2020
41. Karoline Hovde, PhD student in Medicine, Norwegian University of Science and Technology, Dissertation Committee, 2019
42. Thanh Pierre Doan, PhD student for Degree of Philosophiae Doctor, Norwegian University of Science and Technology, Dissertation Committee, 2019
43. Nicole DeAngeli, PhD student in Psychological and Brain Sciences, Dartmouth College, Prelim and Dissertation Committee, 2016-2020, defended 2020.
44. Danielle Fournier, PhD student in Psychological and Brain Sciences, Dartmouth College, Prelim and Dissertation Committee, 2016-2020, defended 2020
45. Kathleen Huntzicker, Neuroscience – NIH Partnership Graduate Program, prelim/dissertation committees, advisor: Heather Cameron, 2018-2022

46. Jamie Catalano, PhD student in MCB, Brown University, Dissertation Committee, 2019-2022.
47. DECLINED External Expert for a PhD examination, for a student of Professor Denise Manahan-Vaughan at the Ruhr University Bochum, Germany, 2023
48. Simon Daste, College de France (Paris), 2018-present, advisor: Alex Fleischmann, 2019-present
49. Megan Gallo, PhD student in Psychology, Brown University, Prelim/Dissertation Committee, 2019-2023
50. Patrick LaChance, PhD student in Psychological and Brain Sciences, Dartmouth College, external member of Dissertation Committee, 2021-present
51. Bahati Nkera, NSGP prelim/dissertation committee, advisor Gilad Barnea, 2021-present
52. Olivia McKissick, NSGP prelim/dissertation committee, advisor Gilad Barnea, 2021-present

Postdoctoral Students Advised

1. David Bucci, Brown, postdoctoral student, 1998-2001
2. Stephane Beaudin, Brown, postdoctoral student, 2002-2003
3. Ray Beck, Brown, postdoctoral student, 2004-2005
4. Sharon Furtak, Brown, postdoctoral student, 02/2007-2010
5. Adria Martig, Brown, postdoctoral student, 07/2010-03/2011
6. Jonathan Ho, Brown, postdoctoral student, 04/2010-11/2013
7. Kristen Kerr, Brown, postdoctoral student, 09/2013-02/2014
8. Inês Tomás Pereira, Brown, postdoctoral student, 05/2013-09/2016
9. Tara Jacobson, Brown, postdoctoral student, 09/2011-2018
10. Victorial Heimer-McGinn, Brown, postdoctoral student, 09/2013-2017
11. Anja Farovik, Brown, postdoctoral student, 05/2016-2018
12. Sean Trettel, Brown, postdoctoral student, 02/2018-2023
13. Fang-Chi Yang, Brown, postdoctoral student, 02/2019-2023

Sponsored Student Federal Funding

NIMH F32MH012426	PI: David J Bucci	Sponsor: Burwell	1999-2001
Visuospatial Processing in Postrhinal Cortex			
NIMH F31MH072144	PI: Kara L Agster	Sponsor: Burwell	2005-2007
Postrhinal Cortex and Attentional Functions			
NIMH F32MH084443	PI: Sharon C Furtak	Sponsor: Burwell	2009-2011
The Neural Basis of Spatial Context			
NSF Graduate Fellowship	PI: Valerie Estela	Sponsor: Burwell	2014-2018
Object-location conjunctive coding in the hippocampus and parahippocampal regions			
NIMH F32MH105210	PI: Victoria Heimer-McGinn	Sponsor: Burwell	2015-2018
Perirhinal Contributions to Postrhinal Representations of Context			
NINDS F99NS108537	PI: Valerie J. Estela-Pro	Sponsor: Burwell	2018-2020
Postrhinal Interactions with the Hippocampus in Context-Guided Behavior			

NEI F32EY031561 PI: Sean Gregory Trettel Sponsor: Burwell 2020-2022
Investigating The Functional Role Of The Pulvinar-Postrhinal Circuit In Visuospatial
Attention

NINDS F99NS129180 PI: Taylor Blaine Wise Sponsor: Burwell 2022-2024
Posterior Parietal Contributions To Spatial And Social Cognition

Publications with Mentored Students

Undergraduate authors: bold black

Graduate student authors: bold red

Postdoctoral and research associate authors: bold blue

Chen, H.-C., & Burwell, R. D. (1996). An anterograde tract-tracing study of the perirhinal and postrhinal cortical projections to the thalamus in the rat brain. *J. Undergraduate Res.*, 3(1), 47-68.

Burwell, R. D., Shapiro, M. S., **O'Malley, M. T.**, & Eichenbaum, H. (1998). Positional firing properties of perirhinal cortex neurons. *NeuroReport*, 9, 3013-3018.

Burwell, R. D., **Bucci, D. J.**, Wiig, K. A., **Saddoris, M. P.**, & **Sanborn, M. R.** (2002). Experimental lesions of the parahippocampal region in rats. In M. P. Witter & F. G. Wouterlood (Eds.), *The Parahippocampal Region, Organization and Role in Cognitive Functions*. London: Oxford University Press.

Bucci, D. J., **Saddoris, M. P.**, & Burwell, R. D. (2002). Contextual fear discrimination is impaired by damage to postrhinal or perirhinal cortex. *Behavioral Neuroscience*, 116(3), 479-488.

Burwell, R.D. & **Hafeman, D.** (2003). Positional firing properties of postrhinal neurons in the rat. *Neuroscience* 119(2), 577-588.

Burwell, R. D., **Saddoris, M. P.**, **Bucci, D. J.** & Wiig, K.A. (2004). Corticohippocampal Contributions to Spatial and Contextual Learning, *Journal of Neuroscience*. 24:3826-36.

Burwell, R. D., **Bucci, D. J.**, **Sanborn, M. R.**, & **Jutras, M. J.** (2004). Postrhinal and perirhinal contributions to remote memory for context. *J Neurosci*, 24(49), 11023-11028.

Long, M. A., **Jutras, M. J.**, Connors, B. W., & Burwell, R. D. (2005). Electrical synapses coordinate activity in the suprachiasmatic nucleus. *Nat Neurosci*, 8(1), 61-66.

Sills, J.B., Connors, B.W., and Burwell, R.D. (2012). Electrophysiological and morphological properties of neurons in layer 5 of the rat postrhinal cortex. *Hippocampus*. Sep. 22(9):1912-22. PMID: PMC3660403.

Gastelum, E.D., Guilhardi, P., and Burwell, R.D. (2012). The effects of combined perirhinal and postrhinal damage on complex discrimination tasks. *Hippocampus*. Oct. 22 (10):2059-67.

Futak, S.C., Ahmed, O.J., and Burwell, R.D. (2012). Single neuron activity and theta modulation in postrhinal cortex during visual object discrimination. *Neuron*. Dec. 6 (76:976-988. PMID: PMC3523310.

Beaudin, S.A., Singh, T., Agster, K.L., and Burwell, R.D. (2013). Borders and Comparative Cytoarchitecture of the Perirhinal and Postrhinal Cortices in an F1 Hybrid Mouse. *Cerebral cortex*. 23(2):460-76.

Agster, K.L. and Burwell, R. D. (2013) Hippocampal afferents and efferents of the perirhinal, postrhinal, and entorhinal cortices, *Behavioural Brain Research*. Published online, 2013 Oct 1;254:50-64.

Jacobson T.K., Ho J.W., Kent B.W., **Yang, F-C.**, Burwell R.D. (2014) Automated visual cognitive tasks for recording neural activity using a Floor Projection Maze, *J. Vis. Exp.* (84), e51316.

Scaplen K.M., Gulati A.A., Heimer-McGinn V.L., Burwell R.D. (2014) Objects and landmarks: Hippocampal place cells respond differently to manipulations of visual cues depending on size, perspective, and experience. *Hippocampus*. 2014 Nov; 24(11):1287-99. PMID: PMC5615844.

Tomas Pereira, I., & Burwell, R. D. (2015). Using the spatial learning index to evaluate performance on the water maze. *Behav. Neurosci.*, 129(4), 533-539. PMID: PMC5077721.

Ho, J. W., Poeta, D. L., Jacobson, T. K., Zolnik, T. A., Neske, G. T., Connors, B. W., & Burwell, R. D. (2015). Bidirectional Modulation of Recognition Memory. *J Neurosci*, 35(39), 13323-13335. PMID: PMC4588607

Tomás Pereira, I., Agster, K.L., and Burwell, R. D. (2016). Subcortical connections of the perirhinal, postrhinal, and entorhinal cortices. I. Afferents. *Hippocampus*. 2016 Sep;26(9):1189-212. doi: 10.1002/hipo.22603. PMID: PMC5070464.

Agster, KL, Tomás Pereira, I., Saddoris, M.P., and Burwell, R. D. (2016). Subcortical connections of the perirhinal, postrhinal, and entorhinal cortices. II. Efferents. *Hippocampus*. 2016 Sep;26(9):1213-30. doi: 10.1002/hipo.22600. PMID: PMC5070461.

Yang, F-C, Jacobson T.K., Burwell R.D. (2017) Posterior parietal cells signal stimulus onset, spatial locations, and behavioral outcome during performance on a visuospatial attention task. *Hippocampus*. 2017 27(3):263-273. doi: 10.1002/hipo.22691. PMID: PMC5644026

Heimer-McGinn VR, Poeta DL, Aghi K, Udawatta M, & Burwell RD. (2017) Disconnection of the perirhinal and postrhinal cortices impairs recognition of objects in context but not contextual fear conditioning. *The Journal of Neuroscience*, 37(18):4819–4829. doi: 10.1523/JNEUROSCI.0254-17.2017. PMID: PMC5426571.

Scaplen KM, Ramesh RN, Nadvar N, Ahmed OJ, Burwell RD. (2017) Inactivation of the lateral entorhinal area increases the influence of visual cues on hippocampal place cell activity." *Frontiers in Systems Neuroscience* 11 (2017): 40. doi: 10.3389/fnsys.2017.00040. PMID: PMC5447019.

Hwang, E., Willis, B.S., Burwell, R.D. (2018) Prefrontal connections of the perirhinal and postrhinal cortices in the rat. *Behav. Brain Res.* 354:8-21. doi: 10.1016/j.bbr.2017.07.032. PMID: PMC6087504.

Bounds, H.A., Poeta, D.L. Klinge, P.M., Burwell, R.D. (2019) Paw-Print Analysis of Contrast-Enhanced Recordings (PrAnCER): A low-cost, open-access automated gait analysis system for assessing motor deficits, *J Vis Exp.* 2019 Aug 12;(150). doi: 10.3791/59596. PMID: 31449248.

Yang, F-C & Burwell, R.D. (2020). Neuronal Activity in the Rat Pulvinar Correlates with Multiple Higher-Order Cognitive Functions. *Vision (Basel)*. 2020 Mar 1;4(1):15. doi: 10.3390/vision4010015

Ghosh M., **Shanahan, B., Furtak, S.C.**, Mashour, G.A., Burwell, R.D., Ahmed, O.J. (2020) Instantaneous amplitude and shape of postrhinal theta oscillations differentially encode running speed, *Neurosci.* 2020 Dec;134(6):516-528. doi: 10.1037/bne0000416.

Yang, F-C, Dokovna, L.B., Burwell R.D. (2022). Functional Differentiation of Dorsal and Ventral Posterior Parietal Cortex of the Rat: Implications for Controlled and Stimulus-Driven Attention. *Cerebral cortex*, 32(9), 1787-1803. <https://doi.org/10.1093/cercor/bhab308>

Chapters in books

Burwell, R. D., **Bucci, D. J.**, Wiig, K. A., **Saddoris, M. P., & Sanborn, M. R.** (2002). Experimental lesions of the parahippocampal region in rats. In M. P. Witter & F. G. Wouterlood (Eds.), *The Parahippocampal Region, Organization and Role in Cognitive Functions*. London: Oxford University Press.

Burwell, R. D., & **Agster, K. L.** (2008). Anatomy of the hippocampus and the declarative memory system. In H. E. Eichenbaum (Ed.), *Memory Systems* (Vol. 3, pp. 47-66) of J.H. Byrne (Ed.), *Learning and Memory: A Comprehensive Reference*. Oxford: Elsevier.

Burwell, R. D., & **Agster, K. L.** (2008). Anatomy of the hippocampus and the declarative memory system. In J. H. Byrne (Ed.), *Concise Learning and Memory: The Editor's Selection* (pp. 189-208). London: Academic Press.

Ho, J.W. & Burwell, R. D. (2014). Perirhinal and postrhinal functional inputs to the hippocampus. In Knierim, J.J. & Derdikman, D. (Ed.), *Space, Time & Memory in the Hippocampal Formation*. New York: Springer Publishing Company.

Scaplen, K.M., Agster, K. L., & Burwell, R. D. (2017). Anatomy of the hippocampus and the declarative memory system. In H. E. Eichenbaum (Ed.), *Systems and Neuroscience* (Vol. 3) of J.H. Byrne (Ed.), *Learning and Memory: A Comprehensive Reference*, 2nd Edition. Oxford: Elsevier.

Poeta, D.I. & Burwell, R.D. (2022). Parahippocampal Cortex. In J. Vonk (Ed.) & T.K. Shackelford (Ed.). *Encyclopedia of Animal Cognition and Behavior*. Springer International Publishing.