

CURRICULUM VITAE

DAVID J. BUCCI, PH.D.



Associate Professor
Psychological & Brain Sciences
Dartmouth College
Hanover, NH 03755
(603) 646-3439
david.j.bucci@dartmouth.edu
<http://www.dartmouth.edu/~psych/people/faculty/bucci.html>

EDUCATION

- Ph.D. in Neurobiology, University of North Carolina, Chapel Hill (1998)
Dissertation: *Basal Forebrain Cholinergic Projections to Posterior Parietal Cortex: A Role in Attention*, (Drs. Michela Gallagher and Peter Holland, advisors)
- B.A. in Biology & Psychology (Honors), Wesleyan University, Middletown, CT (1990)
Thesis: *Use of an Avoidance Paradigm to Study Drug Effects on Cognitive Processes*, (Drs. Harry Sinnamon and Sandra Moon, advisors)

PROFESSIONAL POSITIONS

- Associate Professor (with tenure), Department of Psychological and Brain Sciences, Dartmouth College, Hanover, NH, 2008-present
- Adjunct Associate Professor, Department of Neurology, Dartmouth Hitchcock Medical Center, Lebanon, NH, 2010-present
- Assistant Professor, Department of Psychological and Brain Sciences, Dartmouth College, Hanover, NH, 2004-2008
- Assistant Professor, Psychology Department, University of Vermont, Burlington, VT, 2001-2004
- Adjunct Assistant Professor, Biology Department, University of Vermont, 2001-2004
- Consulting Scientist, Nemogen, Inc., Providence, RI, 2000-2001
- Postdoctoral Fellow, Departments of Psychology and Neuroscience, Brown University, 1998-2001
- Graduate Research Assistant, University of North Carolina, Chapel Hill, 1992-1998
- Assistant Research Scientist, Neuropharmacology Department, Bristol-Myers Squibb Co., 1990-1992

HONORS and AWARDS

- Graduate Faculty Mentor Award, 2008-2009
- McLane Family Fellowship, 2008-2009
- John M. Manley Huntington Memorial Award, 2008
- NARSAD Elizabeth Elser Doolittle Investigator, 2007-2008
- Martens Family Research Award, 2007
- Burroughs Wellcome Fund Career Award Nominee, 2005
- John Merck Scholars Program Nominee, 2004
- Keck Foundation Distinguished Young Scholar Award Nominee, 2004
- NIMH Postdoctoral Fellow, Individual National Research Service Award, 1999-2001
- NIMH Predoctoral Fellow, Individual National Research Service Award, 1996-1998
- Hoechst-Celanese/University of North Carolina Neuroscience Award, 1994-1997
- NIMH Predoctoral Fellow, Institutional National Research Service Award, 1993-1994
- Graduate School Merit Assistantship, University of North Carolina, 1992-1993
- Howard Hughes Medical Institute Life Sciences Fellowship, 1989
- Meserve Memorial Scholar, 1986-1987

RESEARCH SUPPORT

Current Support

National Science Foundation

Contributions of Retrosplenial Cortex to the Medial Temporal Lobe Memory System
7/1/09-6/30/12; \$429,000 (Principal Investigator)

National Institute of Mental Health

A Translational Approach to Evaluating the Effects of Physical Activity on ADHD
2009-2014; \$724,732 (Consortium Principal Investigator)

Dartmouth Neuroscience Center Collaborative/Translational Grant

Cholinergic Mechanisms Involved in Cue Discrimination
2008-2010; \$30,000 (Co-Investigator)

Rockefeller Center at Dartmouth College

Physical Exercise: Effects on Brain Function and Behavior
2008-2009; \$23,380 (Principal Investigator)

Previous Grant Support

National Science Foundation

Faculty Early Career Development Award
Brain Mechanisms of Conditioned Stimulus Processing
2004-2010; \$659,185 (Principal Investigator)

NARSAD Young Investigator Award

Elizabeth Elser Doolittle Investigator
Contributions of Kynurenic Acid to Cognitive Dysfunction in Schizophrenia
2007-2009; \$60,000 (Principal Investigator)

National Institute on Alcohol Abuse and Alcoholism

Toward Optimal Treatment for Schizophrenia and Co-Occurring Alcohol Use Disorder: Integrating Biological, Cognitive and Psychosocial Models
2009; \$100,000 (Co-Investigator)

Walter and Constance Burke Research Initiation Award

Exercise-induced Changes in Cognition and Neural Function
2007-2009; \$12,500 (Principal Investigator)

National Institute of Mental Health/National Institute of Drug Abuse

Cholinergic Involvement in ADHD and Substance Abuse
2003-2007; \$552,726 (Principal Investigator)

National Institute of Mental Health

Hormones in Sex-Different Developmental Psychopathology
2005-2007; \$560,625 (Consultant)

Dartmouth Neuroscience Center Collaborative/Translational Grant

Alcohol-induced c-Fos Immunoreactivity in the Extended Amygdala in a Rat Model of Schizophrenia
2005-2007, \$15,000 (Co-Investigator)

Walter and Constance Burke Research Initiation Award

Nicotinic Acetylcholine Receptors and Attention
2004-2007; \$10,000 (Principal Investigator)

Dartmouth Neuroscience Center Collaborative/Translational Grant

Development of an Animal Model of Chemotherapy-induced Cognitive Dysfunction
2005-2006, \$15,000 (Principal Investigator)

National Institute of Mental Health
Kynurenic Acid Regulation of Stimulus Processing
2005-2006; \$51,855 (Sponsor)

VGN/BRIN Program/National Center for Research Resources and VT EPSCOR
Cortical Attention Systems and ADHD
2003-2005; \$47,000 (Principal Investigator)

National Science Foundation
Research Experience for Undergraduates
Brain Mechanisms of Stimulus Processing
2005; \$15,000 (Principal Investigator)

National Institute of Mental Health
Attentional Processing in Posterior Parietal Cortex
2002-2004; \$75,500 (Principal Investigator)

National Science Foundation
Experimental Program to Stimulate Competitive Research
Spatial Learning Assessed with a Radial Arm Maze
2003-2004; \$13,320 (Principal Investigator)

National Institute of Mental Health
Postdoctoral Individual National Research Service Award
Visuospatial Processing in Postrhinal Cortex
1999-2001; \$75,000 (Principal Investigator)

National Institute of Mental Health
Predoctoral Individual National Research Service Award
Cholinergic Corticopetal System and Attention
1996-1998; \$60,000 (Principal Investigator)

PUBLISHED ARTICLES

1. Hopkins, M.E. and **Bucci, D.J.** (in press) *Mechanisms underlying exercise-induced improvement in object recognition memory*. *Neurobiology of Learning and Memory*.
2. MacLeod, J.E. and **Bucci, D.J.** (2010) *Contributions of the subregions of medial prefrontal cortex to negative occasion setting*. *Behavioral Neuroscience*, 124, 321-328.
3. Gullledge, A.T., **Bucci, D.J.**, Zhang, S., Matsui, M., and Yeh, H.H. (2009) *M1 receptors mediate cholinergic modulation of the excitability of neocortical pyramidal neurons*. *Journal of Neuroscience*, 29, 9888-9902.
4. Hopkins, M.E., Sharma, M., Evans, G.C., and **Bucci, D.J.** (2009) *Voluntary physical exercise alters attentional orienting and social behavior in rat model of attention-deficit/hyperactivity disorder*. *Behavioral Neuroscience*, 123, 599-606.
5. Chess, A.C., Landers, A.M., and **Bucci, D.J.** (2009) *L-kynurenine treatment alters contextual fear conditioning and context discrimination but not cue-specific fear conditioning*. *Behavioural Brain Research*, 201, 325-331.
6. Keene, C.S. and **Bucci, D.J.** (2009) *Damage to the retrosplenial cortex produces specific impairments in spatial working memory*. *Neurobiology of Learning and Memory*, 91, 408-414.
7. Kesner, R.P. and **Bucci, D.J.** (2009) *Attentional, perceptual, mnemonic and sensory-motor integration functions of the parietal cortex: a comparative approach*. *Neurobiology of Learning and Memory*, 91, 103. (special issue preface)
8. **Bucci, D.J.** (2009) *Posterior parietal cortex: An interface between attention and learning?* *Neurobiology of Learning and Memory*, 91, 114-120. (review article)
9. Keene, C.S. and **Bucci, D.J.** (2008c) *Neurotoxic lesions of retrosplenial cortex disrupt signaled and unsignalled contextual fear conditioning*. *Behavioral Neuroscience*, 122, 1070-1077.
10. Keene, C.S. and **Bucci, D.J.** (2008b) *Involvement of the retrosplenial cortex in processing multiple conditioned stimuli*. *Behavioral Neuroscience*, 122, 651-658.
11. Keene, C.S. and **Bucci, D.J.** (2008a) *Contributions of the retrosplenial and posterior parietal cortices to cue-specific and contextual fear conditioning*. *Behavioral Neuroscience*, 122, 89-97.
12. **Bucci, D.J.**, Hopkins, M.E., Keene, C.S., Sharma, M., and Orr, L.E. (2008) *Sex differences in learning and inhibition in spontaneously hypertensive rats*. *Behavioural Brain Research*, 187, 27-32.
13. **Bucci, D.J.**, Hopkins, M.E., Nunez, A.A., Breedlove, S.M., Sisk, C., and Nigg, J.T. (2008) *Effects of sex hormones on associative learning in the spontaneously hypertensive rat*. *Physiology and Behavior*, 93, 651-657.
14. **Bucci, D.J.** and MacLeod, J.E. (2007) *Changes in neural activation during a surprise-induced enhancement of attention*. *European Journal of Neuroscience*, 26, 2669-2676.
15. Keene, C.S. and **Bucci, D.J.** (2007) *Automated measure of conditioned orienting behavior in rats*. *Behavior Research Methods*, 39(2), 303-308.
16. **Bucci, D.J.** and Falls, W.A. (2007) *An undergraduate neuroscience seminar based on the annual meeting of the society for neuroscience*. *Journal of Undergraduate Neuroscience Education*, 5(2), A49-A52.
17. MacLeod, J.E., DeLeo, J., Hickey, W., Ahles, T.A., Saykin, A.J., **Bucci, D.J.** (2007) *Cancer chemotherapy impairs contextual but not cued fear conditioning in rats*. *Behavioural Brain Research*, 181, 168-172.
18. Chess, A.C., Simoni, M.K., Alling, T.E., and **Bucci, D.J.** (2007) *Elevations of endogenous kynurenic acid produce spatial working memory deficits*. *Schizophrenia Bulletin*, 33(3), 797-804.

19. MacLeod, J.E., Potter, A.S., Simoni, M.K., and **Bucci, D.J.** (2006) *Nicotine administration enhances conditioned inhibition in rats*. *European Journal of Pharmacology*, 551, 76-79.
20. Potter, A.S., Newhouse, P.N., and **Bucci, D.J.** (2006) *Central nicotinic cholinergic systems: A role in attention-deficit/hyperactivity disorder?* *Behavioural Brain Research*, 175, 201-211. (review article)
21. Arenos, J.D., Musty, R.E., and **Bucci, D.J.** (2006) *Blockade of cannabinoid CB1 receptors alters contextual learning and memory*. *European Journal of Pharmacology*, 539, 177-183.
22. Chess, A.C. and **Bucci, D.J.** (2006) *Increased levels of cerebral kynurenic acid alter stimulus processing and conditioned responding in rats*. *Behavioural Brain Research*, 170, 326-332.
23. Weltzin, M., Zhao, H., Drew, K.L., and **Bucci, D.J.** (2006) *Arousal from hibernation alters contextual learning and memory*. *Behavioural Brain Research*, 167, 128-133.
24. **Bucci, D.J.** and Chess, A.C. (2005) *Specific changes in conditioned responding following neurotoxic damage to the posterior parietal cortex*. *Behavioral Neuroscience*, 119, 1580-1587.
25. Chess, A.C., Keene, C.S., Wyzik, E.C., and **Bucci, D.J.** (2005) *Stimulus processing and associative learning in Wistar and WKHA rats*. *Behavioral Neuroscience*, 119, 772-780.
26. Zhao, H., **Bucci, D.J.**, Weltzin, M., and Drew, K.L. (2004) *Effects of aversive stimuli on learning and memory in arctic ground squirrels*. *Behavioural Brain Research*, 151, 219-224.
27. Burwell, R.D., **Bucci, D.J.**, Sanborn, M.R., and Jutras, M.J. (2004) *Perirhinal and postrhinal contribution to remote memory for context*. *Journal of Neuroscience*, 24, 11023-11028.
28. **Bucci, D.J.** and Burwell, R.D. (2004) *Deficits in attentional orienting following damage to postrhinal or perirhinal cortex*. *Behavioral Neuroscience*, 118, 1117-1122.
29. Burwell, R.D., Saddoris, M.P., **Bucci, D.J.**, and Wiig, K.A. (2004) *Corticohippocampal contributions to spatial and contextual learning*. *Journal of Neuroscience*, 24, 3826-3836.
30. **Bucci, D.J.**, Saddoris, M.P., and Burwell, R.D. (2002) *Damage to Postrhinal or Perirhinal Cortex Impairs Performance of a Contextual Fear Discrimination*. *Behavioral Neuroscience*, 116(3), 479-488.
31. Burwell, R.D., **Bucci, D.J.**, Wiig, K.A., Saddoris, M.P., and Sanborn, M.R. (2002) *Experimental lesions of the parahippocampal region in rats*. In: The Parahippocampal Region, Organization and Role in Cognitive Functions (M.P. Witter and F.G. Wouterlood, eds.). (book chapter)
32. **Bucci, D.J.**, Phillips, R.G., and Burwell, R.B. (2000) *Contributions of postrhinal and perirhinal cortices to contextual information processing*. *Behavioral Neuroscience*, 114(5), 882-894.
33. **Bucci, D.J.**, Conley, M.C., and Gallagher, M. (1999) *Thalamic and basal forebrain cholinergic connections of the rat posterior parietal cortex*. *NeuroReport*, 10(5), 941-945.
34. Baxter, M.G., **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1999) *Impairments in conditioned stimulus processing and conditioned responding after combined selective removal of hippocampal and neocortical cholinergic input*. *Behavioral Neuroscience*, 113(3), 486-495.
35. **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1998) *Removal of cholinergic input to rat posterior parietal cortex disrupts incremental processing of conditioned stimuli*. *Journal of Neuroscience*, 18(19), 8038-8046.
36. **Bucci, D.J.**, Rosen, D.L., and Gallagher, M. (1998) *Effect of age on pilocarpine-induced c-fos expression in rat hippocampus and cortex*. *Neurobiology of Aging*, 19(3), 227-232.
37. Baxter, M.G., **Bucci, D.J.**, Sobel, T.J., Gorman, L.K., and Gallagher, M. (1996) *Intact spatial learning following lesions of basal forebrain cholinergic neurons*. *NeuroReport*, 7, 1417-1420.
38. Chiba, A.A., **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1995) *Basal forebrain cholinergic lesions disrupt increments but not decrements in conditioned stimulus processing*. *Journal of Neuroscience*, 15(11), 7315-7322.

39. Baxter, M.G., **Bucci, D.J.**, Gorman, L.K., Wiley, R.G., and Gallagher, M. (1995) *Selective immunotoxic lesions of basal forebrain cholinergic cells: Effects on learning and memory in rats.* Behavioral Neuroscience, 109(4), 714-722.
40. Morrow, A.L., Devaud, L.L., **Bucci, D.J.**, and Smith, F.D. (1995) *GABA_A and NMDA receptor subunit mRNA expression in ethanol dependent rats.* Alcohol and Alcoholism, Supp(2), 91-97.
41. **Bucci, D.J.**, Chiba, A.A., and Gallagher, M. (1995) *Spatial learning in male and female Long-Evans rats.* Behavioral Neuroscience, 109(1), 180-183.
42. Gallagher, M., Gill, T.M., Baxter, M.G., and **Bucci, D.J.** (1994) *The development of neurobiological models for cognitive decline in aging.* Seminars in the Neurosciences, 6(6), 351-358. (review article)

ARTICLES SUBMITTED or in PREPARATION

1. Akagbosu, C.O. and **Bucci, D.J.** (submitted) *Exposure to kynurenic acid during adolescence produces memory deficits in adulthood.* Schizophrenia Bulletin.
2. MacLeod, J.E., Vucovich, M.M., and **Bucci, D.J.** (revise and resubmit) *Differential Effects of Nicotinic Acetylcholine Receptor Stimulation on Negative Occasion Setting.* Behavioral Neuroscience.
3. Keene, C.S., Duan, D., Ross, E.L., and **Bucci, D.J.** (in revision) *Specific contributions of the retrosplenial cortex to associative learning and memory.* Behavioral Neuroscience.
4. Potter, A.S., **Bucci, D.J.**, and Newhouse, P.A. (in revision) *Nicotinic modulation of behavioral inhibition in adult Attention-Deficit Hyperactivity Disorder.* Biological Psychiatry.
5. Hopkins, M.E. and **Bucci, D.J.** (in prep) *Differential affects of physical exercise on fear learning and memory.* Behavioral Neuroscience.
6. Robinson, A.R. and **Bucci, D.J.** (in prep) *Effects of physical exercise on ADHD-like behavior in male and female adolescent Spontaneously Hypertensive Rats.* Behavioral and Brain Functions.
7. Keene, C.S. and **Bucci, D.J.** (in prep) *Cognitive functions of the retrosplenial cortex.* Neuroscience and Biobehavioral Reviews (review article)
8. Hopkins, M.E. and **Bucci, D.J.** (in prep) *Voluntary physical exercise during adolescence versus adulthood has differential effects on learning and memory later in life.*
9. Potter, A.S., **Bucci, D.J.**, Newhouse, P.N. (in prep) *Gender differences in inhibitory behavior and response to cholinergic agents.*

CONFERENCE PRESENTATIONS

1. Robinson, S., NDong, C., DeLeo, J.A., and **Bucci, D.J.** (2010) *Fear conditioning is associated with increased Arc mRNA expression in the retrosplenial cortex.* Society for Neuroscience Abstracts.
2. Hopkins, M.E. and **Bucci, D.J.** (2010) *Interpreting the effects of exercise on fear conditioning depends on the time of day that rats were trained and tested.* Society for Neuroscience Abstracts.
3. Payne, H.L, **Bucci, D.J.**, and Robinson, S. (2010) *Lesions of the postsubiculum impair fear conditioning.* Society for Neuroscience Abstracts.
4. Akagbosu, C.O., Evans, G.C., and **Bucci, D.J.** (2010) *Exposure to high levels of kynurenic acid during adolescence leads to cognitive dysfunction during adulthood.* Society for Neuroscience Abstracts.
5. Zhang, S., Gulick, D., Gulledge, A.T., **Bucci, D.J.** (2010) *Disruption of muscarinic acetylcholine receptors or SK-channels in prefrontal cortex impairs cue detection in mice.* Society for Neuroscience Abstracts.
6. MacLeod, J.E., Vucovich, M.M., and **Bucci, D.J.** (2010) *Differential effects of nicotinic acetylcholine receptor stimulation on negative occasion setting.* Society for Neuroscience Abstracts.
7. Robinson, A.M. and **Bucci, D.J.** (2010) *Exercising during adolescence reduces orienting behavior in the adult Spontaneously Hypertensive Rat (SHR).* Society for Neuroscience Abstracts.
8. Palmer, A.R., Hopkins, M.E., and **Bucci, D.J.** (2010) Physical exercise-induced cognitive improvement and anxiolytic effects in adolescent rats. Dartmouth Neuroscience Day, Hanover, NH.
9. Hopkins, M.E. and **Bucci, D.J.** (2010) Mechanisms Underlying Exercise-Induced Improvement in Object Recognition Memory. Dartmouth Neuroscience Day, Hanover, NH.
10. Robinson, A.M. and **Bucci, D.J.** (2010) Exercising during adolescence reduces orienting behavior in the adult Spontaneously Hypertensive Rat. Dartmouth Neuroscience Day, Hanover, NH.
11. MacLeod, J.E., and **Bucci, D.J.** (2009) *Neural circuits mediating the effects of nicotine on inhibitory behavior.* Annual Meeting of the Society for Research on Nicotine and Tobacco, Baltimore, MD.
12. Keene, C.S. and **Bucci, D.J.** (2009) *What does the retrosplenial cortex do? Insights from associative learning.* Annual Meeting of the Pavlovian Society, Burlington, VT.
13. MacLeod, J.E., and **Bucci, D.J.** (2009) *Contributions of the rodent medial prefrontal cortex to negative occasion setting.* Annual Meeting of the Pavlovian Society, Burlington, VT.
14. Hopkins, M.E. and **Bucci, D.J.** (2009) *Physical exercise in juvenile rats induces longer-lasting performance improvements in object recognition, compared to adults.* Vermont Summer Summit on Learning and Memory.
15. Duan, D., Keene, C.S., Ross, E.L., and **Bucci, D.J.** (2009) *Characterization of the role of retrosplenial cortex in learning and memory.* Society for Neuroscience Abstracts.
16. Hopkins, M.E. and **Bucci, D.J.** (2009) *Evidence for dissociable mechanisms underlying the cognitive improvement and anxiolytic effects of voluntary physical exercise in male Long Evans rats.* Society for Neuroscience Abstracts.
17. MacLeod, J.E., Ackerman, C.M., and **Bucci, D.J.** (2009) *Contributions of the medial prefrontal cortex to negative occasion setting.* Society for Neuroscience Abstracts.
18. Guo, L., Evans, G.C., and **Bucci, D.J.** (2009) *Behavioral effects of increased endogenous kynurenic acid concentration: Implications for cognitive dysfunction in schizophrenia.* Society for Neuroscience Abstracts.

19. Zhang, S., Gullledge, A.T., Matsui, M., and **Bucci, D.J.** (2009) *Deficits in cue detection and associative learning in mice lacking M1 acetylcholine receptors*. Dartmouth Neuroscience Day, Hanover, NH.
20. Ackerman, C., MacLeod, J.E., and **Bucci, D.J.** (2009) *Contribution of the cholinergic prefrontal cortex to inhibitory learning*. Dartmouth Neuroscience Day, Hanover, NH.
21. Hopkins, M.E. and **Bucci, D.J.** (2009) *Voluntary exercise provides stress-protection in male Long Evans rats and improves performance in a novel object recognition task*. Dartmouth Neuroscience Day, Hanover, NH.
22. Evans, G.C., Guo, L. and **Bucci, D.J.** (2009) *Effects of increased kynurenic acid concentration on social behavior and novel object recognition: Implications for schizophrenia*. Dartmouth Neuroscience Day, Hanover, NH.
23. Duan, D., Lamont E., Ross, E., Keene, C.S., and **Bucci, D.J.** (2009) *Characterization of the role of retrosplenial cortex in learning and memory*. Dartmouth Neuroscience Day, Hanover, NH.
24. Hopkins, M.E. and **Bucci, D.J.** (2008) *Factors that influence the effects of exercise on fear conditioning*. 33rd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah
25. **Bucci, D.J.** and MacLeod, J.E. (2008) *Cholinergic modulation of learned inhibition*. Annual Meeting of the Pavlovian Society, Weehawken, NJ.
26. Keene, C.S. and **Bucci, D.J.** (2008) *Contributions of retrosplenial cortex to associative learning*. Annual Meeting of the Pavlovian Society, Weehawken, NJ.
27. Zhang, S., Gullledge, A.T., Matsui, M., and **Bucci, D.J.** (2008) *Cue detection and associative learning are impaired in mice that lack either the M1 or M5 muscarinic acetylcholine receptor*. Vermont Summer Summit on Learning and Memory.
28. Hopkins, M.E. and **Bucci, D.J.** (2008) *Physical exercise and fear conditioning: learning and memory, or stress and anxiety?* Vermont Summer Summit on Learning and Memory.
29. Keene, C.S. and **Bucci, D.J.** (2008) *Restroplenic cortex has a critical role in contextual fear conditioning*. Vermont Summer Summit on Learning and Memory.
30. MacLeod, J.E. and **Bucci, D.J.** (2008) *Nicotine and learned inhibition: effects on attention*. Vermont Summer Summit on Learning and Memory.
31. Newhouse, P.A., Potter, A.S., and **Bucci, D.J.** (2008) *Recent advances in understanding the role of central nicotinic cholinergic systems in ADHD using translational models*. Annual Meeting of the American College of Neuropsychopharmacology.
32. Hopkins, M.E. and **Bucci, D.J.** (2008) *Two weeks of voluntary exercise reduces anxiety-like behavior and enhances extinction learning in rats*. Society for Neuroscience Abstracts.
33. MacLeod, J.E. and **Bucci, D.J.** (2008) *Mechanisms underlying cholinergic modulation of learned inhibition*. Society for Neuroscience Abstracts.
34. Keene, C.S. and **Bucci, D.J.** (2008) *Neurotoxic lesions of retrosplenial cortex impair signaled and unsigned contextual fear conditioning*. Society for Neuroscience Abstracts.
35. Guo, L. and **Bucci, D.J.** (2008) *A role for posterior parietal cortex in processing non-spatial, simultaneously-occurring stimuli*. Society for Neuroscience Abstracts.
36. Campbell, B.W., Keene, C.S., Chowdhury, F.N., and **Bucci, D.J.** (2008) *Retrosplenial cortex has a long-term role in contextual fear learning and memory*. Society for Neuroscience Abstracts.
37. Sharma, M., Hopkins, M.E., and **Bucci, D.J.** (2008) *Voluntary physical exercise produces sex-dependent changes in attentional orienting and social behavior in spontaneously-hyperactive rats*. Society for Neuroscience Abstracts.

38. Gullledge, A.T., Matsui, M., **Bucci, D.J.**, and Yeh, H.H. (2008) *M1 receptors gate cholinergic modulation of pyramidal neurons in the neocortex and hippocampus*. Society for Neuroscience Abstracts.
39. Landers, A.M., Chess, A.C, and **Bucci, D.J.** (2008) *Contextual fear memory is impaired by administration of l-kynurenine prior to training*. Society for Neuroscience Abstracts.
40. Zhang, S., Gullledge, A.T., Matsui, M., and **Bucci, D.J.** (2008) *Mice lacking M1 or M5 acetylcholine receptors exhibit deficits in cue detection and associative learning*. Society for Neuroscience Abstracts.
41. Campbell, B.W., Keene, C.S., and **Bucci, D.J.** (2008) *Lesions of retrosplenial cortex 28 days after training impair cue-specific and contextual fear conditioning*. Dartmouth Neuroscience Day, Hanover, NH.
42. Duan, D., Vucovich, M.M., and **Bucci, D.J.** (2008) *Nicotine alters multiple forms of conditioned inhibition: Implications for ADHD and schizophrenia*. Dartmouth Neuroscience Day, Hanover, NH.
43. Keene, C.S. and **Bucci, D.J.** (2008) *Neurotoxic lesions of retrosplenial cortex impair signaled and unsignaled contextual fear conditioning*. Dartmouth Neuroscience Day, Hanover, NH.
44. Hopkins, M.E. and **Bucci, D.J.** (2008) *Physical exercise may protect rats from anxiogenic effects of fear conditioning*. Dartmouth Neuroscience Day, Hanover, NH.
45. **Bucci, D.J.** and Keene, C.S. (2008) *A central role for the retrosplenial cortex in processing multiple conditioned stimuli*. Eastern Psychological Association Annual Meeting, Boston, MA.
46. Keene, C.S., Burns, T.H., and **Bucci, D.J.** (2007) *Electrolytic lesions of retrosplenial cortex disrupt processing of multiple stimuli in a compound feature-negative discrimination*. Program No. 558.3, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
47. Nigg, J.T., Hopkins, M.E., Breedlove, S.M., Nunez, A.A., Sisk, C., and **Bucci, D.J.** (2007) *Differential effects of testosterone on learning in Spontaneously-Hypertensive (SHR) and Wistar rats*. Program No. 386.13, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
48. Vucovich, M.M., Hopkins, M.E., and **Bucci, D.J.** (2007) *The role of nicotinic acetylcholine receptors in conditioned inhibition*. Program No. 746.1, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
49. Hopkins, M.E. and **Bucci, D.J.** (2007) *Effects of voluntary exercise on social behavior, learning, and memory: Implications for psychiatric illness*. Program No. 386.17, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
50. MacLeod, J.E. and **Bucci, D.J.** (2007) *Surprise-induced changes in neural activity: a quantitative analysis*. Program No. 741.22, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
51. **Bucci, D.J.** and Vucovich, M.M. (2007) *Nicotine administration enhances conditioned inhibition in a serial but not a compound feature negative discrimination task*. Program No. 746.2, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
52. Sharma, M., Orr, L.E., Keene, C.S., and **Bucci, D.J.** (2007) *Sex and strain differences in conditioned inhibitory behavior in Spontaneously Hypertensive (SHR) and Wistar-Kyoto (WKY) rats*. Program No. 386.15, Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, CD-ROM.
53. Keene, C.S. and **Bucci, D.J.** (2007) *Involvement of retrosplenial cortex in processing multiple stimuli*. Vermont Summer Summit on Learning and Memory.
54. MacLeod, J.E. and **Bucci, D.J.** (2007) *Surprise-induced changes in neural activity*. Vermont Summer Summit on Learning and Memory.

55. Hopkins, M.E. and **Bucci, D.J.** (2007) *Physical exercise and cognitive function*. Vermont Summer Summit on Learning and Memory.
56. Hopkins, M.E. and **Bucci, D.J.** (2007) *Effects of voluntary exercise on cognitive function and the brain: Implications for psychiatric illness*. Dartmouth Neuroscience Meeting, Hanover, NH.
57. Burns, T.H., Chess, A.C., and **Bucci, D.J.** (2007) *Increased concentration of endogenous kynurenic acid has specific effects on fear conditioning in rats*. Dartmouth Neuroscience Meeting, Hanover, NH.
58. Alling, T.E., Chess, A.C., and **Bucci, D.J.** (2007) *Effects of elevated kynurenic acid concentration on place and response learning*. Dartmouth Neuroscience Meeting, Hanover, NH.
59. Vucovich, M.E., Hopkins, M.E., MacLeod, J.E., and **Bucci, D.J.** (2007). *The role of nicotinic acetylcholine receptors in conditioned inhibition: implications for cognitive disorders*. Dartmouth Neuroscience Meeting, Hanover, NH.
60. Keene, C.S. and **Bucci, D.J.** (2007) *Effects of pre- and post-training lesions of retrosplenial cortex on cue-specific and contextual fear memory*. Dartmouth Neuroscience Meeting, Hanover, NH.
61. **Bucci, D.J.**, MacLeod, J.E., Simoni, M.K., Potter, A.S. (2006) *Nicotine enhances the acquisition of a serial feature negative discrimination*. Annual Meeting of the Pavlovian Society, Philadelphia, PA.
62. Chess, A.C. and **Bucci, D.J.** (2006) *Elevations of endogenous kynurenic acid retard contextual fear discrimination but do not affect contextual or cued fear conditioning*. Annual Meeting of the Pavlovian Society, Philadelphia, PA.
63. Keene, C.S. and **Bucci, D.J.** (2006) *Lesions of retrosplenial cortex selectively disrupt contextual memory following fear conditioning: Effects of pre- and post-training lesions*. Annual Meeting of the Pavlovian Society, Philadelphia, PA.
64. Cormier, J.E, Keene, C.S., and **Bucci, D.J.** (2006) *Lesions of the retrosplenial cortex impair decreases in attentional processing*. Program No. 463.4. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
65. Chess, A.C., Burns, T.H., and **Bucci, D.J.** (2006) *Elevations of endogenous kynurenic acid differentially affect acquisition and expression of conditional learning*. Program No. 267.18. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
66. **Bucci, D.J.**, Keene, C.S., and Sharma, M. (2006) *SHR rats exhibit sex differences in conditioned inhibitory behavior*. Program No. 97.8. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
67. **Bucci, D.J.** and Falls, W.A. (2006) *A neuroscience seminar based on the SFN annual meeting*. Program No. 24.7. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
68. MacLeod, J.E., **Bucci, D.J.**, DeLeo, J.A., Hickey, W.F., Saykin, A.J., and Ahles, T.A. (2006) *Chemotherapy treatment impairs contextual fear conditioning and spatial working memory in female rats*. Program No. 811.23. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
69. Nigg, J.T., Breedlove, S.M., Nunez, A.A., Sisk, C., and **Bucci, D.J.** (2006) *Sex differences in simple conditioning in SHR rats: The role of sex hormones*. Program No. 462.23. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
70. Simoni, M.K., MacLeod, J.E., Potter, A.S., and **Bucci, D.J.** (2006) *Nicotine affects acquisition but not performance of a conditional discrimination*. Program No. 162.6. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
71. Burns, T.H., Chess, A.C., and **Bucci, D.J.** (2006) *Cued and contextual fear conditioning are unaffected by increased concentration of endogenous kynurenic acid*. Program No. 267.19. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.

72. Keene, C.S. and **Bucci, D.J.** (2006) *Post-training but not pre-training lesions of retrosplenial cortex selectively disrupt contextual memory following fear conditioning.* Program No. 575.7. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
73. Drew, K.L., Weltzin, M.M., Zhao, H., and **Bucci, D.J.** (2006) *Arousal from hibernation alters contextual learning and memory.* Annual meeting of the American Society of Neurochemistry, Portland, OR.
74. Cormier, J.E, Keene, C.S., and **Bucci, D.J.** (2006) *Lesions of the retrosplenial cortex impair the processing of multiple stimuli.* Dartmouth Neuroscience Meeting, Hanover, NH.
75. Simoni, M.K., MacLeod, J.E., and **Bucci, D.J.** (2006) *Nicotine improves inhibitory behavior in rats: implications for schizophrenia and Attention-Deficit/Hyperactivity Disorder.* Dartmouth Neuroscience Meeting, Hanover, NH.
76. MacLeod, J.E., **Bucci, D.J.**, DeLeo, J.A., Hickey, W.F., Saykin, A.J., and Ahles, T. (2006) *Chemotherapy treatment impairs memory in female rats.* Dartmouth Neuroscience Meeting, Hanover, NH.
77. **Bucci, D.J.**, Cole, S., Mackey, M.B., Nigg, J.T., Sisk, C., Breedlove, S.M., Wade, J., and Nunez, A.A. (2006) *Sex differences in cognitive function in an animal model of attention-deficit/hyperactivity disorder: the role of sex hormones.* Dartmouth Neuroscience Meeting, Hanover, NH.
78. Keene, C.S. and **Bucci, D.J.** (2006) *Development of an automated measure of attention in rats.* Dartmouth Neuroscience Meeting, Hanover, NH.
79. **Bucci, D.J.**, Arenos, J.D., and Musty, R.E. (2005) *Blockade of CB₁ Receptors Alters Processing of Contextual Information.* Annual Meeting of the Pavlovian Society, Los Angeles, CA.
80. Keene, C.S., Chess, A.C., and **Bucci, D.J.** (2005) *Contributions of the retrosplenial cortex to attentional processing of conditioned stimuli and spatial learning.* Annual Meeting of the Pavlovian Society, Los Angeles, CA.
81. Keene, C.S, Chess, A.C., and **Bucci, D.J.** (2005) *Contributions of the retrosplenial cortex to attentional processing of conditioned stimuli and spatial learning.* Program No. 411.13. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
82. Chess, A.C. and **Bucci, D.J.** (2005) *Elevations of endogenous kynurenic acid impair spatial working memory.* Program No. 887.7. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
83. **Bucci, D.J.**, Chess, A.C., Keene, C.S., and Hendley, E.D. (2005) *Increased exploratory behavior of novel and familiar stimuli and potential sex differences in orienting behavior in WKHA rats.* Program No. 878.8. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
84. Musty, R.E., Arenos, J.D, and **Bucci, D.J.** (2005) *Blockade of the CB₁ receptor with AM251 alters the processing of contextual information.* Program No. 654.1. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
85. Chess, A.C. and **Bucci, D.J.** (2005) *The effects of kynurenic acid on associative learning: implications for attentional dysfunction.* Dartmouth Neuroscience Meeting, Hanover, NH.
86. Keene, C.S. and **Bucci, D.J.** (2005) *Contributions of the retrosplenial cortex to attentional processing of conditioned stimuli and spatial learning.* Dartmouth Neuroscience Meeting, Hanover, NH.
87. **Bucci, D.J.**, Weltzin, M.M., Zhao, H., and Drew, K.L. (2005) *Arousal from hibernation: A natural model of adult cognitive enhancement.* Dartmouth Neuroscience Meeting, Hanover, NH.
88. Chess, A.C. and **Bucci, D.J.** (2004) *Kynurenic acid alters appetitive conditioning and the orienting response to a visual cue.* Program No. 780.9. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.

89. Keene, C.S. and **Bucci, D.J.** (2004) *Alterations in attentional processing of conditioned stimuli following electrolytic lesions of the retrosplenial cortex*. Program No. 332.2. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
90. Arenos, J.D., Musty, R.E., and **Bucci, D.J.** (2004) *Antagonism of the cannabinoid-1 (CB1) receptor has differential effects on cued and contextual fear conditioning*. Program No. 1006.6. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
91. Chess, A.C. and **Bucci, D.J.** (2004) *Kynurenic acid alters appetitive conditioning and the orienting response to a visual cue*. Integrative Physiological and Behavioral Science, 39, 217 (Annual Meeting of the Pavlovian Society, Baltimore, MD).
92. **Bucci, D.J.** and Chess, A.C. (2004) *Alterations in attentional processing of conditioned stimuli following neurotoxic damage to the posterior parietal cortex*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
93. **Bucci, D.J.**, Weltzin, M., Zhao, H., and Drew, K. (2004) *Hibernation, learning, and memory*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
94. Chess, A.C. and **Bucci, D.J.** (2004) *Kynurenic acid alters simple appetitive conditioning*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
95. Chess, A.C., Wyzik, E.C., Hendley, E.D., and **Bucci, D.J.** (2004) *Conditioned responding to visual stimuli is altered in WKHA rats*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
96. **Bucci, D.J.** and Chess, A.C. (2003) *Alterations in attentional processing of conditioned stimuli following neurotoxic damage to the posterior parietal cortex*. Program No. 516.5. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
97. Chess, A.C., Wyzik, E.C., Hendley, E.D., and **Bucci, D.J.** (2003) *Conditioned responding to visual stimuli is altered in WKHA rats*. Program No. 324.5. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
98. Weltzin, M., **Bucci, D.J.**, Zhao, H., and Drew, K. (2003) *Hibernation, learning, and memory*. Program No. 199.13. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
99. **Bucci, D.J.** (2003) *Lesion models of cholinergic dysfunction*. Annual Meeting of the Society for Biological Psychiatry.
100. **Bucci, D.J.** and Letourneau, A.R. (2002) *Effects of neurotoxic lesions of rat posterior parietal cortex on attentional orienting*. Program No. 674.12. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
101. **Bucci, D.J.** (2002) *Effects of pre-training and post-training lesions of the rat posterior parietal cortex on learning and memory in the Morris water maze*. Program No. 585.17. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
102. Zhao, H., **Bucci, D.J.**, Weltzin, M., and Drew, K. (2002) *Hibernation and learning and memory of arctic ground squirrel*. Program No. 283.18. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
103. **Bucci, D.J.** and Letourneau, A.R. (2002) *Effects of neurotoxic lesions of rat posterior parietal cortex on attentional orienting*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
104. **Bucci, D.J.** (2002) *Effects of pre-training and post-training lesions of the rat posterior parietal cortex on learning and memory in the Morris water maze*. Neuroscience Forum, VT Chapter of the Society for Neuroscience.
105. Zhao, H., **Bucci, D.J.**, Weltzin, M., and Drew, K.L. (2002) *Effects of aversive stimuli on learning and memory*. Alaskan Basic Neuroscience Conference.

106. **Bucci, D.J.** and Burwell, R.D. (2001) *Specific deficits in attentional orienting following lesions of the postrhinal cortex*. Program No. 313.1. 2001 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
107. Burwell, R.D., **Bucci, D.J.**, Wiig, K.A., Sadoris, M.P., and Bear, M.F. (2001) *Neurotoxic lesions of the rat parahippocampal region do not produce deficits in the Morris watermaze task*. Program No. 314.10. 2001 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
108. Sanborn, M.R., **Bucci, D.J.**, and Burwell, R.D. (2001) *Long-term processing of contextual information involves perirhinal and postrhinal cortex*. Program No. 187.16. 2001 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience.
109. **Bucci, D.J.** and Burwell, R.D. (2001) *Specific deficits in attentional orienting following lesions of the postrhinal cortex*. Seventh Conference on the Neurobiology of Learning & Memory, University of California, Irvine.
110. Burwell, R.D., Sanborn, M.R., and **Bucci, D.J.** (2001) *Long-term memory of contextual information involves perirhinal and postrhinal cortex*. Seventh Conference on the Neurobiology of Learning & Memory, University of California, Irvine.
111. Sadoris, M.P., **Bucci, D.J.**, and Burwell, R.D. (2000) *Effects of postrhinal vs. perirhinal cortex lesions on contextual fear discrimination*. Society for Neuroscience Abstracts, 26.
112. **Bucci, D.J.** and 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, 92.
113. Sadoris, M.P., **Bucci, D.J.**, and Burwell, R.D. (1999) *The effects of time-of-day cues on context discrimination*. Society for Neuroscience Abstracts, 25, 92.
114. **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1998) *Removal of cholinergic input to posterior parietal cortex disrupts increments in conditioned stimulus processing*. Society for Neuroscience Abstracts, 24, 171.
115. **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1997) *Deficits in attention produced by selective removal of cholinergic projections to posterior parietal cortex*. Society for Neuroscience Abstracts, 23, 1838.
116. **Bucci, D.J.**, Rosen, D.L., and Gallagher, M. (1996) *Age-related differences in pilocarpine-induced c-fos expression*. Society for Neuroscience Abstracts, 22, 1235.
117. Baxter, M.B., **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1996) *Combined selective lesions of both septohippocampal and corticopetal basal forebrain cholinergic projections disrupt attentional processing but not spatial learning*. Society for Neuroscience Abstracts, 22, 681.
118. **Bucci, D.J.**, Chiba, A.A., Holland, P.C., and Gallagher, M. (1995) *C-fos induction during an incremental change in attention*. Society for Neuroscience Abstracts, 21, 935.
119. Chiba, A.A., **Bucci, D.J.**, Holland, P.C., and Gallagher, M. (1994) *Substantia innominata lesions impair incremental attentional processing in a Pavlovian conditioning paradigm*. Meeting on Learning and Memory, Cold Spring Harbor Laboratory.
120. Baxter, M.G., **Bucci, D.J.**, Gorman, L.K., Gallagher, M. (1994) *Selective immunotoxic lesions of basal forebrain cholinergic cells: Effects on learning and memory*. Meeting on Learning and Memory, Cold Spring Harbor Laboratory.
121. **Bucci, D.J.**, Chiba, A.A., and Gallagher, M. (1994) *A study of spatial learning in male and female Long-Evans rats*. Society for Neuroscience Abstracts, 20, 363.
122. Baxter, M.G., **Bucci, D.J.**, Chiba, A.A., Thai, L., Wiley, R.G., and Gallagher, M. (1994) *192-IgG-saporin lesions of basal forebrain cholinergic cells: Effects on learning and memory in rats*. Society for Neuroscience Abstracts, 20, 1215.

123. **Bucci, D.J.**, Keir, W.J., and Morrow, A.L. (1993) *Effect of chronic ethanol administration on NMDA-R1 receptor subunit mRNA levels*. Society for Neuroscience Abstracts, 19, 378.
124. **Bucci, D.J.**, Mahle, C.D., Karten, H.J., and Carter, R.B. (1992) *Autoradiographic localization of 5-HT_{1A} receptors in pigeon brain*. Society for Neuroscience Abstracts, 18, 93.
125. Mahle, C.D., Nowak, H.P., **Bucci, D.J.**, Carter, R.B., and Yocca, F.D. (1992) *[³H]5-carboxamidotryptamine labels multiple high affinity binding sites in vertebrate brain*. Society for Neuroscience Abstracts, 18, 1519.
126. Mahle, C.D., Nowak, H.P., **Bucci, D.J.**, Carter, R.B., and Yocca, F.D. (1992) *Species dependent differences in multiple [³H]5-carboxamidotryptamine (5-HT_{1D-like}) binding sites in vertebrate brain*. International Symposium on Serotonin, Houston, TX.
127. Yocca, F.D., Nowak, H.P., **Bucci, D.J.**, Carter, R.B., and Mahle, C.D. (1992) *Species differences in multiple [³H]5-carboxamidotryptamine-sensitive (5-HT_{1D-like}) binding sites in vertebrate brain*. British Journal of Pharmacology, 107, 117 (Summer Meeting, British Pharmacological Society, Dublin, Ireland).

INVITED TALKS and PRESENTATIONS**2010**

Neurobiology of Attention. Psychological and Brain Sciences, Dartmouth College.

Rodent Models of Developmental Psychopathology. Benefits, Limitations, and New Directions. Perinatal Research Society, Avon, CO.

New directions in mental health research - What does nicotine have to do with mental health?. Healthy Minds Across America Symposium, Lebanon, NH

Beyond the Hippocampus: Cortical Contributions to Learning and Memory. Cognitive Neuroscience Seminar, Dartmouth College, Hanover, NH.

Exercising the Brain: Insights and Implications for Mental Illness. Dartmouth Medical School, Hanover, NH.

Cortico-hippocampal Circuits: Unique contributions to Learning and Memory. Neuroscience Program, St. Mary's College of Maryland.

Gliotransmitters and Schizophrenia-related Cognitive Impairment. Dartmouth Medical School, Hanover, NH.

Kynurenic Acid and Cognitive Dysfunction. Maryland Psychiatric Research Center.

Mental and Physical Exercise for Your Brain: Making Memories Last a Lifetime, Dartmouth Outreach Program.

Differential patterns of neural activation in the amygdala during surprise-induced changes in attention and learning. Winter Brain, Breckenridge, CO.

2009

Use of the Spontaneously Hypertensive Rat Strain to Model Mental Illness: Behavioral and Pharmacological Considerations. Department of Pharmacology, University of Vermont

New Directions in Understanding Factors that Contribute to Co-occurring Psychopathology and Substance Abuse. Dual Diagnosis Conference, Fairlee, VT

Involvement of M1 acetylcholine receptors in cue detection. Vermont Summer Summit on Learning and Memory, Burlington, VT.

Kynurenic Acid: What is it and Where is it? Implications for Cognitive Dysfunction. Pathophysiological Basis of Brain Diseases Lecture, Dartmouth Medical School, Hanover, NH.

New Insights into the Function of Parietal Cortex: Implications for Learning and Memory. Session Organizer, 33rd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah

Contributions of Posterior Parietal Cortex to Attention and Associative Learning in Rodents. 33rd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah

Physical Exercise and Cognitive Function. Session Co-organizer, 33rd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah

2008

Your Brain on College. Dartmouth College Student Interest Group in Neurology and Neuroscience, Hanover, NH.

Brain Systems Underlying Conditioned Fear: Current views and future directions. Department of Physiology, Dartmouth Medical School, Hanover, NH.

Nicotine Enhances Conditioned Inhibition in a Serial but not a Compound Feature Negative Discrimination Task in Rats: Implications for Deficits in Inhibitory Behavior in Psychiatric Illness, Society for Research on Nicotine and Tobacco 14th Annual Meeting

Translating Nicotinic Effects on Cognition: From Basic Science to Clinical Populations and Back Again, Symposium Co-Chair, Society for Research on Nicotine and Tobacco 14th Annual Meeting

Contribution of Retrosplenial Cortex to Processing Multiple Conditioned Stimuli, 32nd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah

2007

Sex and Strain: Does it Matter? Vermont Summer Summit on Learning and Memory, Burlington, VT.

Invited Panelist, Annual Conference on Survival Skills and Ethics, Snowmass, Colorado

Surprise-Induced Enhancement of Learning Depends on NMDA Receptor Activation, 31st Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

2006

"Glio-transmitters": A Role in Normal Cognitive Function? Annual Meeting of the Vermont Chapter of the Society for Neuroscience, Stowe, VT.

A Multidimensional Approach to Studying the Neurobiology of Cognition, Department of Psychology, Wesleyan University.

Nicotine Improves Response Inhibition in a Serial Feature Negative Discrimination Task in Rats, 30th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

Cortical Cholinergic Attention Systems: Interactions and Competition, Department of Psychology, Kansas State University.

2005

Animal Models of Attention: Relevance to ADHD, Department of Psychology, Michigan State University.

Cholinergic Systems in Attention & Memory: Peace At Last? Psychiatry Department, University of Vermont College of Medicine.

Glial Modulation of Learning and Memory, 29th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

Arousal from Hibernation: A Natural Model of Synaptic Plasticity, Psychological and Brain Sciences, Dartmouth College.

2004

Competition and Interaction Between Cortical Attention Systems, Psychology Department, Bowling Green State University.

Cholinergic Systems, Attention & Memory: Contemporary Views and Clinical Implications, Brain Imaging Laboratory, Department of Psychiatry, Dartmouth Medical School.

Principles of Receptors, Signaling, and Synaptic Transmission, Psychiatry Department, University of Vermont College of Medicine.

Brain Mechanisms Underlying Conditioned Stimulus Processing and Attention, Department of Psychological and Brain Sciences, Dartmouth College.

Cortical Cholinergic Systems: Attention or Memory? Psychiatry Department, University of Vermont College of Medicine.

2003

Controversies Regarding Cholinergic Function in Cognition: Intersection of Animal models and Human Studies, Workshop Chair, Society for Biological Psychiatry Annual Meeting, San Francisco, CA.

Animal Models of Cholinergic Dysfunction, Society for Biological Psychiatry Annual Meeting, San Francisco, CA.

Use of Nonparametric Statistics in Psychological Research, Psychology Department, University of Vermont.

2002

Cortical Cholinergic System: Memory or Attention? Alaska Basic Neuroscience Program, Institute of Arctic Biology, University of Alaska, Fairbanks.

Non-monoamine Neurotransmitters: Neurobiology & Clinical Relevance, Psychiatry Department, University of Vermont College of Medicine.

Factors Contributing to Contextual Fear Conditioning Deficits Following Damage to Postrhinal or Perirhinal Cortex, 26th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

2001

Cortical Acetylcholine and Cognition, Department of Biology, University of Vermont.

Anatomical and Behavioral Characterization of Cholinergic Input to the Posterior Parietal Cortex, Department of Anatomy and Neurobiology, University of Vermont.

Getting To and From a Postdoctoral Position, National Science Foundation Brain and Behavior Mentoring Program, Brown University.

Establishing a Postdoctoral Association, Annual Postdoctoral Meeting, American Association for the Advancement of Science, National Academy of Sciences.

Mnemonic and Attentional Processing in the Postrhinal Cortex, Department of Psychology, University of Vermont.

Effects of Postrhinal or Perirhinal Cortex Lesions on Conditioned Orienting, 25th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

2000

Cortical Contributions to Cognitive Function, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Cholinergic Systems and Cognition, Memory Pharmaceuticals, Inc., New York.

Effects of Postrhinal or Perirhinal Cortex Lesions on a Contextual Fear Discrimination Task, 24th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

Cholinergic Input to Rat Posterior Parietal Cortex: A Role in Attention? Bristol-Myers Squibb Pharmaceutical Research Institute.

1999

Removal of Cholinergic Input to Posterior Parietal Cortex Disrupts Attentional Processing in an Unblocking Paradigm, 23rd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

1998

Basal Forebrain Cholinergic Input to Posterior Parietal Cortex: A role in Attention? Brown University.

Deficits in Attention Produced by Selective Removal of Cholinergic Projections to Posterior Parietal Cortex, 22nd Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

1995

Selective Cholinergic Lesions of Septal Input to the Hippocampus Impair Decremental Attentional Processing, 19th Annual Winter Conference on the Neurobiology of Learning & Memory, Park City, Utah.

TEACHING (at Dartmouth College)

Undergraduate

PSYC 1: Introduction to Psychological Science (winter 2010, spring 2010)
PSYC 6: Introduction to Neuroscience (2007, 2008, 2009, 2010)
PSYC 11: Laboratory in Psychological Science (spring 2005, summer 2005, 2007, 2008, 2009)
PSYC 52: Animal Learning (2009)
PSYC 86: Neuroscience Seminar and Annual Meeting (2005, 2007, 2010)

Graduate

PSYC 111: Neurobiology of Attention (2008)
PSYC 112: Proseminar in Behavioral Neuroscience (2005, 2006, 2007, 2008, 2010)

Medical

PEMM 102: Experimental and Molecular Medicine, Neuroscience Module (2007, 2008, 2009, 2010)

TEACHING (at The University of Vermont)

Undergraduate

PSYC 121: Biopsychology (2002, 2003, 2004)
PSYC 221: Physiological Psychology (2001, 2002, 2003)
PSYC 190: Advanced Neuroscience Seminar (2003)

Graduate

PSYC 380: Neurobiology of Learning & Memory (2003)
PSYC 303: Proseminar in Psychology/Neuroscience (2004)

Medical

Clinical Neurobiology and Neuropharmacology (Spring 2002, 2003)
Advanced Neuroscience Seminar (Fall 2002, 2003)

PROFESSIONAL SOCIETIES

American Psychological Association (Division 6 Webmaster and Newsletter Editor)
Association for Psychological Science
Eastern Psychological Association
Faculty for Undergraduate Neuroscience
Pavlovian Society
Society for Neuroscience
Society for Research on Nicotine and Tobacco
Vermont Chapter of the Society for Neuroscience

EDITORIAL ACTIVITIES

Manuscript Review

Behavioral Neuroscience
Behavioral and Brain Functions
Behavioural Brain Research
Brain Research
Cerebral Cortex
Cognitive, Affective, and Behavioral Neuroscience
European Journal of Neuroscience
European Journal of Pharmacology
Hippocampus
International Journal of Developmental Neuroscience
International Journal of Neuropsychopharmacology
Journal of Neuroscience
Journal of Psychiatry and Neuroscience
Journal of Psychopharmacology
Learning and Memory
Molecular Neurobiology
Nature Reviews Neuroscience
Neurobiology of Aging
Neurobiology of Disease
Neurobiology of Learning and Memory
Neuropsychopharmacology
NeuroReport
Neuroscience Letters
Neuroscience and Biobehavioral Reviews
Neurotoxicology Research
Pharmacology, Biochemistry and Behavior
Psychopharmacology
Quarterly Journal of Experimental Psychology

Editorial boards

Editorial board member, *Neurobiology of Learning and Memory*
Guest editor, *Neurobiology of Learning and Memory*

Textbook Review

Lippincott Williams & Wilkins
Oxford University Press
Sinauer Associates
Wadsworth Publishers

Grant Review

Dartmouth College Center for Clinical & Translational Science
Maine Institute for Human Genetics and Health

National Science Foundation:

- 1) Panel Member, Division of Integrative Organismal Systems, Biological Sciences
- 2) Ad hoc reviewer, Division of Integrative Organismal Systems, Biological Sciences
- 3) Ad hoc reviewer, Experimental Program to Stimulate Competitive Research

Neuroscience Center at Dartmouth

Virginia Tobacco Settlement Foundation

Wellcome Trust

Curricular Review

The Implementation Group, Inc., Washington, DC

Conference Abstract Review

Society for Research on Nicotine and Tobacco Annual Meeting

INSTITUTIONAL SERVICE ACTIVITIES

Committees (Dartmouth College)

Departmental

Chair, Graduate Committee (2009-present)
Planning & Review Committee, 2006; 2009-2010
Graduate Committee (Curriculum Chair), 2008-2009
Neuroscience Steering Committee and major/minor advisor, 2005-present
Ad hoc Neuroscience Curriculum Committee, 2007-2008
Colloquium Committee, 2006-2008
Behavioral/Cognitive Neuroscience Faculty Search Committee, 2006-2007; 2009-2010
Undergraduate Committee, 2005

College

Committee on Standards, 2010-2012
Pilot Committee on Undergraduate Research, 2010-present
Rockefeller Center Faculty Council, 2008-present
Institutional Animal Care and Use Committee, 2008-present
Rockefeller Center Grant Review Committee, 2008-present
Advisory Board, Dartmouth Center for the Advancement of Learning, 2008-present
Arts and Sciences Shop Committee, 2006-2008
Neuroscience Graduate Program Curriculum Committee, 2005-present
Program in Molecular and Experimental Medicine Steering Committee, 2005-2006

Committees (University of Vermont)

Departmental

Curriculum Committee
Space Committee

College

Arts and Sciences Honors Committee
Athletic Council
Center for Teaching and Learning Advisor Board

Outreach Activities

Local Activities

Dartmouth Neuroscience Day (co-organizer), 2008
Mentor for new teaching faculty in Psychological & Brain Sciences, 2006-present
Graduate School Preparation Panel (organizer), 2006
Faculty-Student Dinners, 2006-present
"Interacting with Faculty" Luncheon, 2006
Co-advisor, Society for Psychological and Brain Sciences, 2006-present
Residential Advising Program, Dean of Faculty, 2006-present
Co-advisor, College Student Interest Group in Neurology & Neuroscience, 2006-present
Psychology & Neuroscience Career Panel (organizer), 2005, 2007
New Faculty Orientation Panelist, Office of Sponsored Research, 2006

Regional and National Outreach Activities

Presenter, Elementary School Brain Awareness, Norwich, VT 2010
Panelist, Annual Conference on Survival Skills and Ethics, Snowmass, Colorado, 2007
Alumni Admission Volunteer, Office of Admission, Wesleyan University, 1995-2008
Contributing author, *Scientific American* Teacher's Kits, 1998-2005
Contributing author, *Science's* NextWave.org, 1998-2001
Vice-President, Vermont Chapter of the Society for Neuroscience, 2004-2005
Invited participant, Annual Conference on Survival Skills and Ethics, Snowmass, Colorado, 2001
Co-Founder and President, Brown University Postdoctoral Association, 1999-2001

RESEARCH SUPERVISION (at Dartmouth College)**Undergraduate Students***Honors Research*

Alison Rope (2009-2010), Andrew Palmer (2009-2010), Sunny Zhang (2009-2010), Farshad Chowdhury (2008-2009), Elizabeth Chang (2008-2009), Mita Sharma (2007-2008), Megan Vucovich (2006-2007)

Honors Thesis Committees

Victoria Stockman (2009-2010); Amanda Hernan (2008-2009), Sahar Naseer (2008-2009), Allison Baker (2008-2009), Nicole Lanza (2008-2009), Idan Ariel (2007-2008), Dieu Thi Nguyen (2006-2007), Chadd Funk (2006-2007), Anika Mirick (2006-2007), Jennifer Kosty (2005-2006), Mignon Lamia (2005-2006), Timothy Laumann (2005-2006), Zhen Huang (2005-2006), Asha Sarma (2004-2005)

Independent Studies Research

Cynthia Akagbosu (2010), Joseph Pena (2009), Victoria Stockman (2009), Gretchen Evans (2008, 2009), Sunny Zhang (2008), Lynn Guo (2008), Jonathan Woolf (2008), Tara Burns (2007), Torey Alling (2007), Justine Cormier (2006)

Presidential Scholars

Hannah Payne (2009-2010), Christina Ackerman (2008-2009), Daisy Duan (2008-2009), Allie Landers (2007-2008), Farshad Chowdhury (2007-2008), Mita Sharma (2006-2007), Lauren Orr (2007)

Howard Hughes Medical Institute Research Interns

Hannah Iaccarino (2009-2010), Evan Lamont (2008-2009), Eric Ross (2008-2009), Cynthia Akagbuso (2009), Daisy Duan (2007-2008), Benjamin Campbell (2007-2008)

Other Research Fellows

Michael Simoni (NSF REU, 2005), Matthew Mackey (NSF REU, 2005)

Work-study Research Assistants

Gretchen Evans (2009), Andrew Palmer (2009), Deborah Johnson (2007), Lynn Guo (2007-2008), Torey Alling (2006-2007), Kristin Li (2006), Tara Burns (2006), Stephanie Rathgeb (2006), Michael Simoni (2005-2007), Matthew Mackey (2005)

Volunteer Research Assistants

Sam Haw (2009), Allison Rope (2008), Andrew Palmer (2008), Benjamin Campbell (2006-2007), Ryan Church (2006), Chris Boyle (2005)

Graduate Students*Research Supervision*

Andrea Robinson (2009-), Michael Hopkins (2006-), Jill MacLeod (2005- 2010), Ali Titiz (2010), Lan Guo (2009), Christopher Keene (2003-2008; PhD '08), Amy Chess (2004-2006; PhD '06; NRSA Fellow)

Doctoral Dissertation Committees

Michael Hopkins (2009-), Jonathan Kleen (2009-), Benjamin Clark (2008-), Caroline Davis (2008-), Jill MacLeod (2008-), Lori Newman (UNH, 2007-2009), Sarah Meerts-Bradsma (2006-2008), Brian Russ (2006-2008), Christopher Keene (2006-2008), Amy Chess (2004-2006)

PhD Qualifying Exam Committees

Melissa Rundle (2009-2010), Lisa Sprute (2009-2010), Maraget Gullick (2008-2009), Michael Hopkins (2008-2009), Kristina Caudle (2008-2009), Jonathan Kleen (2008-2009), Benjamin Clark

(2006-2007), Jill MacLeod (2006-2007), Sarah Meerts-Bradtsma (2005-2006), Sarah Wang (2005-2006), Emily Cross (2004-2005), Christopher Keene (2004-2005), Amy Chess (2004-2005)

Postdoctoral Fellows

Siobhan Robinson (2010-), Christopher Keene (2008-2009)

RESEARCH SUPERVISION (at The University of Vermont)

Undergraduate Students

Honors Research

Jeremy Arenos (2003-2004)

Honors Thesis Committees

Jillian Smith (2003), Kara Humphries (2002)

Independent Studies Research

Elizabeth Wyzik (2003)

Work-study Research Assistants

Amy Woodruff (2002-2004), Arielle Bridges (2002-2004), Kara Strippoli (2002-2003)

Volunteer Research Assistants

Sadie Richards (2004), Deepa Ramanathan (2004), Mitra Fotouhi (2003), Ricardo Restrepo (2003)

Graduate Students

Research Supervision

Christopher Keene (2003-2004), Amy Chess (2002-2004)

Doctoral Dissertation Committees

Jaylyn Waddell (2003-2004), Ceyhun Sunsay (2003-2004), Alexandra Potter (2003), Paul Pistell (2003), Spark Campbell (2002-2003), Mary Cain (2001)

PhD Qualifying Exam Committees

Ceyhun Sunsay (2003), Jennifer Plebani (2003), Matthew Johnson (2003), Ryan Vandrey (2003), Rita Rossi (2002)

Masters Thesis Committees

Amy Chess (2002-2003)