

**Wake Forest University
School of Medicine**

Curriculum Vitae

Part I.

NAME: Brian A. McCool, Ph.D.

CURRENT ACADEMIC TITLE: Associate Professor

ADDRESS: Dept. Physiology & Pharmacology
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Wake Forest University School of Medicine
Winston-Salem, NC 27157
336-716-8608 (office)

EDUCATION:

B.S. Molecular Biology (Honors), University of Texas at Austin, Austin TX; 1984-1988

Ph.D., Dept. Molecular Biology, Vanderbilt University, Nashville TN, 1988-1993; NCI Institutional Training Grant (1989-1991), Graduate Research Excellence Award in Molecular Biology (1992)

Dissertation Title: "The Role of Human Transketolase in Wernicke-Korsakoff Syndrome: Biochemical and Molecular Genetic Investigations", Charles K. Singleton Ph.D. (advisor)

POSTDOCTORAL TRAINING:

Vanderbilt University School of Medicine, 1993-1997, David M. Lovinger Ph.D. (advisor); Individual National Postdoctoral Research Service Award, NINDS (F32 NS09719), 1994-1997

EMPLOYMENT:

General employment history

- University of Texas at Austin, Work/Study Program, 1986-1987
- Research Assistant, 1987-1988, Dept. Zoology, Univ. Texas at Austin, Drs. C.S. Lee and L.E. Gilbert (supervisors)
- Graduate Assistant, 1988-1993, Dept. Molecular Biology, Vanderbilt University, Dr. Charles Singleton (supervisor)

Academic experience

2008-present Scientific Director, Translational Center for the Neurobehavioral Study of Alcoholism, Wake Forest University School of Medicine, Winston-Salem NC

2005-present	Associate Professor, Wake Forest University School of Medicine, Department of Physiology & Pharmacology, Winston-Salem NC
2002-2005	Assistant Professor, Wake Forest University School of Medicine, Department of Physiology & Pharmacology, Winston-Salem NC
1997 – 2002	Assistant Professor, Texas A&M University Health Science Center, Department of Medical Pharmacology & Toxicology, College Station TX
1996-1997	Research Instructor, Vanderbilt University School of Medicine, Department of Molecular Physiology & Biophysics, Nashville TN
1993-1996	Postdoctoral Research Associate, Vanderbilt University School of Medicine, Dept. Molecular Physiology & Biophysics, Nashville TN (Dr. D.M. Lovinger, advisor)

OTHER APPOINTMENTS AND INSTITUTIONAL SERVICE:

Editorial work:

Editorial Board: *Alcohol*, 2006-present

Reviewer (Ad Hoc): *Alcohol; Alcoholism Clinical Experimental Research; Behavioral Brain Research; Biochemical Pharmacology; British Journal of Pharmacology; Brain Research; BMC Neuroscience; Cell Biology & Toxicology; European Journal of Pharmacology; Gene; Journal of Biological Chemistry; Journal of Neurochemistry; Journal of Neurophysiology; Journal of Neuroscience; Journal of Neuroscience Methods; Journal of Pharmacology and Experimental Therapeutics; Journal of Physiology; Molecular Pharmacology; Neuropharmacology; Neuroscience; Neuroscience Letters; Pharmacology, Biochemistry, and Behavior; Pharmacology and Therapeutics; The Cerebellum; Toxicological Sciences*

Hospital, School, Medical Center Committees:

Wake Forest University School of Medicine (since 2002)

Institutional Committees/Service

2009-present	Chair, WFU Graduate School Honor Code Panel
2009-present	Member, Doctoral Task Force for Graduate Program Planning
2009-present	President, Western North Carolina Chapter of the Society for Neuroscience
2008-present	WFUSM Faculty Development Advisory Committee
2008-present	WFUSM Institutional Chemical Safety Committee
2008-present	Student Evaluation Committee, Neuroscience Training Program
2008-2009	Secretary, WFU Graduate School Honor Code Panel
2004	Prospective Faculty Interview, Section on Reproductive Medicine (Dr. Yalcinkaya, Candidate)
2004	Prospective Faculty Interview, Dept. Anesthesiology (Dr. Elder, Candidate)
2004-2007	Education Committee, WFUSM Alcohol Training Grant
2003-2006	WFUSM Institutional Chemical Safety Committee

Departmental Committees

2009-present	Faculty Recruitment Committee
2006-present	Seminar (Co-chair)
2006-present	Chair, Graduate Student Evaluation

2005-2008	Basic Dollar Oversight
2005-2008	Conflict of Interest
2005-present	Graduate Student Evaluation
2004-2008	Molecular Core Facilities
2004-present	Graduate Recruiting
2004-2007	Course Director, Cellular and Molecular Physiology PSPR 701
2004-2008	Space Utilization
2004-2006	Graduate Education

Texas A&M Univ. H.S.C. (1997-2002)

Institutional Committees

2001-2002	Faculty Advisory Committee to the Dean, Departmental Representative
2001-2002	Graduate Student Advisor, Cell & Molecular Biology Track, College of Medicine Interdisciplinary Graduate Program
2001-2002	Medical Sciences Library Council, College of Medicine Representative
2001	Graduate Recruiting Committee, College of Medicine Interdisciplinary Program
2000-2001	Southern Association of Colleges and Schools (SACS) Accreditation Self-Study Committee on Educational Support Services
1999-2000	Texas A&M University Faculty of Neurosciences Curriculum Committee
1998-2000	Texas A&M University Faculty of Neurosciences Recruiting Committee

Departmental Committees

1999-2002	Seminar Coordinator, Dept. Med. Pharmacol. & Toxicol.
1998	Faculty Search Committee, Dept. of Med. Pharmacol. & Toxicol. (2 positions)
1998	Course coordinator; MPMH 601 – Physiological Pharmacology
1997-2002	Departmental Safety Officer

PROFESSIONAL MEMBERSHIPS:

Research Society on Alcoholism, member since 2001

Service

- RSA Education Committee, 2005-present
 - Co-chair, Grantsmanship Workshop Subcommittee, 2007-present

American Society for Pharmacology and Experimental Therapeutics, member since 1998

American Association for the Advancement of Science, member since 1993

Society for Neuroscience, member since 1993

HONORS AND AWARDS:

2009	Reviewer, Department of Defense, Congressionally Directed Medical Research Programs, Peer Reviewed Medical Research Program (PRMRP), Translational Research Award (Ad Hoc)
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2009-Present	President, Western North Carolina Chapter of the Society for Neuroscience
2008-Present	Member, NIH/CSR, Neurotoxicity and Alcohol Study Section
2008	Reviewer, NIH/CSR, Neurotoxicity and Alcohol Study Section (Ad Hoc)
2007	Reviewer, NIH/NIAAA ZAA BB98 Special Emphasis Panel, P50 Center Review (Ad Hoc)
2007	Reviewer, NIH/NIMH ZMH1 ERB-Y (02) Special Emphasis Panel, Drug Development Program (Ad Hoc)
2007	Reviewer, INIA-Stress Pilot Program, (Ad Hoc)
2006	Reviewer, Cooperative Grants Program (CGP) of the U.S. Civilian Research and Development Foundation (Ad Hoc)
2005	NIH/NIAAA, ZAA1 Special Emphasis Panel, Center Review (Ad Hoc)
2005	Reviewer, Established Researcher Pilot Grant Program of the Louisiana Board of Regents (Ad Hoc)
2004-2005	NIH, MDCN Fellowship Review Group B-Physiology, Pharmacology and Molecular Structure (Ad Hoc)
2003	Reviewer, INIA East Pilot Grant Program, Wake Forest Univ. School Med. (Ad Hoc)
2002	Reviewer, Pilot Research Grants in the Neurosciences, University of Texas Medical Branch, Galveston (Ad Hoc)
2001-2002	President, Texas A&M University Chapter of the Society for Neuroscience

PROFESSIONAL INTERESTS:

Research interests

The work in my laboratory is an attempt to better understand how the brain regulates behavior in the context of responses that impact on drug abuse (especially alcoholism). While such processes are necessarily complex and involve numerous brain regions, we are interested in a particular region, known as the amygdala, which appears to be a focal point of behavioral regulation. In order to understand the function of the amygdala in the context of alcohol abuse and alcoholism, we utilize numerous cellular and molecular techniques that allow us to investigate the neurotransmitter systems influencing the neurophysiology and neuropharmacology of alcohol abuse in an integrated fashion.

Research in progress

Current projects focus on examining the effects of alcohol on the neurophysiology and neuropharmacology of NMDA-type glutamate, glycine, and GABA_A receptors and on the regulation of gene expression in brain regions that regulate alcohol abuse. We are currently utilizing a number of different model systems, including inbred mouse strains, rats, and non-human primates, to provide a broad perspective on neuroadaptations to chronic alcohol exposure and subsequent withdrawal.

GRANTS – CURRENT AND PENDING:

Current Research Support

- NIH/NIAAA, U01 AA016671, 1/07-12/09, INIA-Stress Consortium; “Genetic Regulation of the

- Ethanol/Anxiety Interaction: Neurobiological Mechanisms”; PI – B. McCool, 25% effort
- NIH/NIAAA, 2 R01 AA014445-05, 7/03 to 4/12; “The Ethanol - Anxiety Interaction: Cellular Mechanisms”; PI – B McCool, 40% effort
 - NIH/NIAAA, R01 AA015568 A1, 8/06 to 7/10; “Early Stress and Alcoholism: Functional Analyses in Brain”; PI – D. Friedman; 10% effort
 - NIH/NIAAA, R01 AA017531 A2, 5/09 to 4/14; “Synaptic Correlates of Ethanol-mediated Anxiolysis”; PI – J. Weiner; 10% effort
 - NIH/NIAAA, P20 AA11997-06; 11/08 to 10/11; “Translational Center for the Neurobehavioral Study of Alcohol”; PIs –J. Weiner, Role: Scientific Director and Co-PI Project 1 (with J. Weiner); 15% effort

Current Support for Graduate Assistants

- NIH/NIAAA, U01 AA016671 S1, Research Diversity Supplement, Trainee – T. Spence

Pending Research Support

- NIH/NIAAA, R01 AA010422 A1; “Ethanol Mechanisms in GABAAR Gene-targeted Mice”; PI – G. Homanics, 10% effort, submitted
- NIH/NIAAA, R21 AA017285, \$250,000 total costs; “Ethanol & Anxiety Interactions: Role of Juvenile Social Experience”; PI – McCool; 25% effort; in revision

PAST GRANT HISTORY (as PI or Mentor):

- NIH/NIAAA, F31 AA017576; 5/08-5/09; “Chronic Alcohol and Withdrawal Effects on Dopamine and GABA in the Basolateral Amygdala”; Trainee – Marvin R. Diaz, Ph.D.
- NIH/NIAAA, F31 AA016442; 8/06-7/07; “Effects of chronic ethanol withdrawal on the amygdala”; Trainee – Anna K. Läck, Ph.D.
- NIH/NIAAA, R21 AA015179 A1; 4/05 to 3/07; “GABA-A Receptors, Ethanol, and Stress in Monkey Amygdala”; PI – B. McCool
- NIH/NIAAA, 7/04 to 6/07, Center for the Neurobehavioral Study of Alcohol, Component 2; Salary support to B McCool; “Neuroadaptation in Excessive Ethanol Self-Administration”; PI – J Weiner
- NIH/NIAAA, 7/04 to 6/07, Center for the Neurobehavioral Study of Alcohol, Component 4, Salary support to B McCool; “Mechanisms of Long-term Sleep Disruption by Excessive Ethanol”; PI – D Godwin
- Wake Forest Intramural Research Support; 01/05 to 12/05; “Primate Models of Alcoholism: Molecular Analysis”; PI – B McCool
- NIH/NIAAA, R21 AA13120; 6/01 to 5/04 with no cost extension until 11/04; “Ethanol & Anxiety: Fearful Adaptations in the Amygdala”; PI – B McCool
- 2002-2003, INIA Pilot Project, 1U01 AA13641, NIAAA, “Adaptations to Stress/Alcohol Exposure in the Amygdala”; PI – B. McCool
- 2002, Pilot Project from the Center for the Neurobehavioral Study of Alcohol (AA11997) at Wake Forest University Health Sciences, “Genetic Responses to Alcohol Self-administration; PI – B. McCool
- 2001-2002, Texas A&M University Center for Environmental and Rural Health, Pilot Project Program, “Ethanol Neurotoxicity & Amygdala NMDA Receptors: An In Vitro Model”; PI – B.

McCool

- 1999-2000, Pharmaceutical Research and Manufacturers of America Foundation Research Starter Grant, "Cellular Basis for Anti-anxiety and Side-effect Liability of Benzodiazepine and Novel Anxiolytic Therapies"; PI – B. McCool

BIBLIOGRAPHY:

Journal articles (peer reviewed)

1. Lee, C.S., McCool, B.A., Moore, J.L., Hillis, D.M., and Gilbert, L.E. (1993) Phylogenetic study of Heliconiine butterflies based on morphology and restriction analysis of ribosomal RNA genes. *Zool. J. Linnean Soc.* **106**: 17-31.
2. McCool, B.A., Plonk, S.G., Martin, P.R., and Singleton, C.K. (1993) Cloning of human transketolase cDNAs and comparison of the nucleotide sequence of the coding region in Wernicke-Korsakoff and non-Wernicke-Korsakoff individuals. *J. Biol. Chem.* **268**: 1397-1404.
3. Martin, P.R., Pekovich, S.R., McCool, B.A., and Singleton, C.K. (1994) Thiamine utilization in the pathogenesis of alcohol-induced brain damage. *Alcohol & Alcohol.* **2**:273-279.
4. Singleton, C.K., Pekovich, S.R., McCool, B.A., and Martin, P.R. (1995) The thiamine-dependent hysteretic behavior of human transketolase: Implications for thiamine deficiency. *J. Nutrition* **125**: 189-194.
5. Lovinger, D.M., and McCool, B.A. (1995) Metabotropic glutamate receptor-mediated presynaptic depression at cortico-striatal synapses involves mGluR2 or 3. *J. Neurophysiol.* **73**: 1076-1083.
6. Ikeda, S.R., Lovinger, D.M., McCool, B.A., and Lewis, D.L. (1995) Metabotropic glutamate receptors heterologously expressed in adult rat sympathetic neurons modulate specific ion channels. *Neuron* **14**: 1029-1035.
7. McCool, B.A., and Lovinger, D.M. (1995) Ifenprodil inhibition of the 5-hydroxytryptamine₃ receptor. *Neuropharmacol.* **34**: 631-637.
8. McCool, B.A., Pin, J.-P., Brust, P.F., Harpold, M.M. and Lovinger, D.M. (1996) Functional coupling of rat group II metabotropic glutamate receptors (mGluR 2&3) to a ω -conotoxin GVIA-sensitive calcium channel in HEK293 cells. *Mol. Pharmacol.* **50**: 912-922.
9. Lakhiani, P.P., MacMillan, L.B., Guo, T.Z., McCool, B.A., Lovinger, D.M., Maze, M., and Limbird, L.E. (1997) Substitution of a mutant α_{2a} -adrenergic receptor via 'hit and run' gene targeting reveals the role of this subtype in sedative, analgesic, and anesthetic-sparing responses *in vivo*. *Proc. Natl. Acad. Sci. USA* **94**: 9950-9955.
10. McCool, B.A., Harpold, M.M., Stauderman, K.A., Brust, P.F., and Lovinger, D.M. (1997) Relative contributions of G protein, channel, and receptor to voltage-dependent inhibition of neuronal N-type and P/Q-type calcium channels. *Neurosci. Lett.* **239**: 89-92.
11. McCool, B.A., Pin, J.-P., Harpold, M.M., Brust, P.F., Stauderman, K.A., and Lovinger, D.M. (1998) Group I metabotropic glutamate receptors inhibit neuronal Ca²⁺ channels via multiple signal transduction pathways in HEK 293 cells. *J. Neurophysiol.* **79**: 379-391.
12. McCool, B.A., and Botting, S.K. (2000) Characterization of strychnine-sensitive glycine receptors in acutely isolated adult rat basolateral amygdala neurons. *Brain Res.* **859**:

341-351.

13. McCool, B.A., and Farroni, J.S. (2001) A₁ adenosine receptors inhibit multiple voltage-gated Ca²⁺ channel subtypes in acutely isolated rat basolateral amygdala neurons. *Brit. J. Pharmacol.* **132**: 879-888.
14. McCool, B.A., and Farroni, J.S. (2001) Subunit composition of strychnine-sensitive glycine receptors in adult rat basolateral amygdala neurons. *Eur. J. Neurosci.* **14**: 1082-1090.
15. Han, S.-H., McCool, B.A., Murchison, D., Nahm, S.-S., Parrish, A.R., and Griffith, W.G. (2002) Single-cell RT-PCR detects shifts in mRNA expression profiles of basal forebrain neurons during aging. *Molec. Brain Res.* **98**: 67-80
16. Jing, J., McCool, B.A., and Parrish, A.R. (2002) Cadmium- and mercury-induced intercellular adhesion molecule-1 expression in immortalized proximal tubule cells: evidence for a role of decreased transforming growth factor- β 1. *Toxicol. Appl. Pharmacol.* **179**: 13-20.
17. Hsiao, S.-H., Parrish, A.R., Nahm, S.-S., Abbott, L.C., McCool, B.A., and Frye, G.D. (2002) Effects of early postnatal ethanol intubation on GABAergic synaptic proteins. *Dev. Brain Res.* **138**: 177-185.
18. McCool, B.A., Frye, G.D., Pulido, M.D., and Botting, S.K. (2003) Effects of chronic ethanol consumption on rat GABA_A and strychnine-sensitive glycine receptors expressed by lateral/basolateral amygdala neurons. *Brain Res.* **963**: 165-177.
19. Vrana, K.E., Hipp, J.D., Goss, A.M., McCool, B.A., Riddle, D., Walker, S.J., Wettstein, P., Studer, L., Tabar, V., Cunniff, K., Chapman, K., Vilner, L., West, M.D., Grant, K.A., and Cibelli, J.B. (2003) Non-human primate parthenogenetic stem cells. *Proc. Natl. Acad. Sci. USA* **100(suppl. 1)**: 11911-11916.
20. Floyd, D.W., Jung, K.-Y., and McCool, B.A. (2003) Chronic ethanol ingestion facilitates N-methyl-D-aspartate receptor function and expression in rat lateral/basolateral amygdala neurons. *J. Pharmacol. Exp. Ther.* **329**:1020–1029.
21. Farroni, J.S., and McCool, B.A. (2004) Subunit composition and expression system influence the agonist pharmacology of strychnine-sensitive glycine receptors. *BMC Pharmacol.* **4**: 16 (<http://www.biomedcentral.com/bmcpharmacol/>).
22. Floyd, D.W., Friedman, D.P., Daunais, J.B., Pierre, P.J., Grant, K.A., and McCool, B.A. (2004) Long-term ethanol ingestion alters GABA_A receptors expressed in the basolateral amygdala of the Cynomolgus macaque, *Macaca fascicularis*. *J. Pharmacol. Exper. Ther.* **311 (3)**: 1071-1079.
23. Läck, A.K., Floyd, D.W., and McCool, B.A. (2005) Chronic ethanol enhances expression of 'fear' promoting factors in the rat central amygdala. *Alcohol* **36(2)**: 83-90.
24. Alexander, G. M., Carden, W. B., Mu, J., Kurukulasuriya, N. C., McCool, B. A., Nordskog, B. K., Friedman, D. P., Daunais, J. B., Grant, K. A., Godwin, D. W. (2006) The native T-type calcium current in relay neurons of the primate thalamus. *Neurosci.* **141(1)**: 453-461.
25. Dubois, D.W., Perlegas, A., Floyd, D.W., Weiner, J.L., and McCool, B.A. (2006) Distinct functional characteristics of the lateral/basolateral amygdala GABAergic system in C57BL/6J and DBA/2J mice. *J. Pharmacol. Exper. Therap.* **318(2)**:629-640.
26. Hemby, S.E., O'connor, J.A., Acosta, G., Floyd, D., Anderson, N., McCool, B.A.,

- Friedman, D., Grant, K.A. (2006) Ethanol-induced regulation of GABA subunit mRNAs in prefrontal fields of cynomolgus monkeys. *Alcohol. Clin. Exp. Res.* **30**(12):1978-85.
27. Chappell, A., and McCool, B.A. (2007) Strychnine and taurine modulation of amygdala-associated anxiety-like behavior is 'State' dependent. *Behav Brain Res.* **178**(1): 70-81.
28. Anderson, N.J., Daunais, J.B., Friedman, D.P., Grant, K.A., and McCool, B.A. (2007) Long-term ethanol self-administration by the non-human primate, *Macaca fascicularis*, decreases the benzodiazepine sensitivity of amygdala GABA(A) receptors. *Alcohol Clin. Exper. Res.* **31**(6): 1061-1070.
29. Läck, A.K., Diaz, M.R., Chappell, A., DuBois, D.W., and McCool, B.A. (2007) Chronic ethanol and withdrawal differentially modulate pre- and postsynaptic function at glutamatergic synapses in rat basolateral amygdala. *J. Neurophysiol.* **98**(6): 3185-96.
30. Läck, A.K., Ariwodola, O.J., Chappell, A.M., Weiner, J.L., and McCool, B.A. (2008) Ethanol inhibition of kainate receptor mediated excitatory neurotransmission in the rat basolateral nucleus of the amygdala. *Neuropharmacology* **55**: 661-68.
31. Chappell, A.M., and McCool, B.A. (2009) Early social isolation in male Long-Evans rats alters both appetitive and consummatory behaviors expressed during operant ethanol self-administration. *Alcohol. Clin. Exper. Res.* **33**(2): 273-282.
32. Läck, A.K., Christian, D.T., Diaz, M.R., and McCool, B.A. (2009) Chronic ethanol and withdrawal effects kainate receptor-mediated excitatory transmission in the rat basolateral amygdala. *Alcohol* **43**(1): 25-33

Abstracts/Scientific Exhibits (since 1997)

- McCool, B.A. (1997) Differential Modulation of voltage-gated calcium channels by adenosine, GABA_B, and group I metabotropic glutamate receptors in acutely isolated amygdala neurons. *Soc. Neurosci. Abstr.* **23**, 471.10.
- McCool, B.A., Farroni, J.S., and Botting, S.K. (1998) Neuropharmacology of transmitter systems in the rat amygdala. TAMU Health Science Center Research Symposium, Temple, TX.
- Botting, S.K., and McCool, B.A. (1998) Strychnine-sensitive glycine currents in the rat basolateral amygdala. *Soc. Neurosci. Abstr.* **24**, 630.12.
- Han, S.H., McCool, B.A., Griffith, W.H. (1999) Combined single-cell RT-PCR and electrophysiology in young and aged rat basal forebrain neurons. *Soc. Neurosci. Abstr.* **25**, 597.14.
- McCool, B.A., Farroni, J.S., and Botting, S.K. (1999) Cellular and molecular characterization of strychnine-sensitive glycine receptors in adult rat basolateral amygdala neurons. *Soc. Neurosci. Abstr.* **25**, 172.9.
- Han, S.-H., McCool, B.A., Murchison, D., Parrish, A.R., and Griffith, W.H. (2000) Molecular diversity of rat basal forebrain neurons during aging. *Soc. Neurosci. Abstr.* **26**, 874.17.
- McCool, B.A. (2000) Adaptation of rat basolateral amygdala neurotransmitter receptors to chronic ethanol exposure. *Soc. Neurosci. Abstr.* **26**, 674.4.
- Farroni, J.S. and McCool, B.A. (2000) Subunit composition of strychnine-sensitive glycine receptors in adult rat basolateral amygdala neurons. *Soc. Neurosci. Abstr.* **26**, 423.7.
- Hsiao, S.-H., Parrish, A.R., McCool, B.A., and Frye, G.D. (2001) Effects of early postnatal ethanol exposure on expression of GABA_A receptor subunits, gephyrin, and other markers of synaptic development. *Soc. Neurosci. Abstr.* **27**, 877.10.

- Han, S.-H., McCool, B.A., Murchison, D., and Griffith, W.H. (2001) Real-time reverse transcription-polymerase chain reaction (RT-PCR) in rat basal forebrain neurons during aging. *Soc. Neurosci. Abstr.* **27**, 861.5.
- Farroni, J.S., and McCool, B.A. (2001) Alterations in the pharmacology of adult rat glycine receptor isoforms in diverse heterologous expression systems. *Soc. Neurosci. Abstr.* **27**, 36.10.
- Farroni, J.S., and McCool, B.A. (2002) Expression system-induced changes in adult rat glycine receptor partial agonist pharmacology. NY Acad. Sci., *Amygdala in Brain Function: Basic and Clinical Approaches*, Abstract #P22
- McCool, B.A., Frye, G.D., Pulido, M.D., and Botting, S.K. (2002) Effects of chronic alcohol ingestion on rat lateral/basolateral amygdala ligand-gated chloride channels. NY Acad. Sci., *Amygdala in Brain Function: Basic and Clinical Approaches*, Abstract #17
- McCool, B.A. (2002) Chronic ethanol ingestion alters N-methyl-D-aspartate receptors in rat lateral/basolateral amygdala neurons. NY Acad. Sci., *Amygdala in Brain Function: Basic and Clinical Approaches*, Abstract #P23
- Botting, S.K., Frye, G.D., Pulido, M.D., and McCool, B.A. (2002) Adaptations of rat lateral/basolateral amygdala GABA_A receptors to chronic ethanol ingestion. *Alcohol Clin Exper Res* **26(5-Suppl)**: 15A.
- McCool, B.A. (2002) Chronic ethanol ingestion alters N-methyl-D-aspartate (NMDA) receptors functional expression in isolated rat lateral/basolateral amygdala neurons. *Alcohol Clin Exper Res* **26 (5 – Suppl)**: 18A.
- Floyd, D.W., and McCool, B.A. (2003) Effects of chronic ethanol on rat NMDA receptor subunit expression within brain regions regulating anxiety. *Alcohol Clin Exper Res* **27 (5 – Suppl)**: 90A.
- Carden, W.B., Alexander, G.A., Kurukulasuriya, N.C., McCool, B.A., Walker, S., Daunais, J.B., Friedman, D.P., Grant, K. A, Godwin, D.W. (2003) Physiological and molecular characterization of native T-type calcium current in the thalamus of a non-human primate. Program No. 699.7. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.
- McCool, B.A., Friedman, D.P., Daunais, J.B., Pierre, P.J., Grant, K.A. (2003) Long-term ethanol ingestion by the non-human primate, *Macaca fascicularis*, alters GABA_A receptors expressed by isolated basolateral amygdala neurons. Program No. 108.9. *2003 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. Online.
- Carden, W.B., Nordskog, B., Alexander, G.M., McCool, B.A., Walker, S.J., Daunais, J.B., Friedman, D.P., Grant, K.A., Godwin, D.W. (2004) Chronic Ethanol Drinking Reduces Native T-type Calcium Current in the Thalamus of Non-Human Primates. *Alcohol. Clin. Exper. Res.* **28(5-suppl)**: 60A.
- Ariwodola, O.J., Bryant, V., Legg, B., Chappel, A., Samson, H. H., McCool, B., Valenzuela, C.F., and Weiner, J. L. (2004) Ethanol inhibition of kainate receptor-mediated excitatory neurotransmission in the rat basolateral nucleus of the amygdala. *Alcohol. Clin. Exper. Res.* **28(5-suppl)**: 132A.
- Perlegas, A.S., Floyd, D.W., and McCool, B.A. (2004) Lateral/basolateral amygdala GABA-A receptor function and expression in C57/Bl6 and DBA/2J mice: effects of repeated ethanol exposure. *Alcohol. Clin. Exper. Res.* **28(5-suppl)**: 58A.
- Floyd, D.W., Friedman, D.P., Daunais, J.B., Pierre, P.J., Grant, K.A., and McCool, B.A. (2004)

- Long-term ethanol ingestion by the Cynomolgus macaque alters GABA-A Receptors expressed by basolateral amygdala neurons. *Alcohol. Clin. Exper. Res.* **28(5-suppl)**: 58A.
- Nordskog, B.K., Carden, W.B., Alexander, G.M., McCool, B.A., Daunais, J.B., Friedman, D.P., Grant, K.A., and Godwin, D.W. (2004) Chronic ethanol consumption in non-human primates alters gene expression of T-type calcium channels. *Society for Neuroscience*
- Läck, A.K., Dubois, D.W., and McCool, B.A. (2005) The effects of ethanol withdrawal on behavioral anxiety and AMPA receptor function in basolateral amygdala of Sprague-Dawley rats. *Alcohol. Clin. Exper. Res.* **29(5-suppl)**: 141A.
- DuBois, D.W., Weiner, J.L., and McCool, B.A. (2005) The effects of ethanol on synaptic GABA_A receptor function in basolateral amygdala from C57/BL6 and DBA/2J mice. *Alcohol. Clin. Exper. Res.* **29(5-suppl)**: 142A.
- DuBois, D.W., Ariwodola, O.J., Daunais, J.B., Friedman, D.P., Weiner, J.L., Grant, K.A., and McCool, B.A. (2005) The effects of chronic ethanol on synaptic GABA_A receptor function in lateral amygdala from the cynomolgus macaque. *Alcohol. Clin. Exper. Res.* **29(5-suppl)**: 142A.
- DuBois, D.W., Weiner, J.L., and McCool, B.A. (2005) Distinct function and expression of lateral/basolateral amygdala GABA_A receptors in C57/BL6 and DBA/2J mice. *Society for Neuroscience*.
- McCool, B.A., and Chappell, A.M. (2005) Strychnine and taurine modulation of amygdala-dependent anxiety-like behaviors. *Society for Neuroscience*.
- Diaz, M.R., and McCool, B.A. (2006) Dopaminergic Modulation of GABAergic synaptic transmission in the rat lateral/basolateral amygdala. *Alcohol. Clin. Exper. Res.* **30(6-suppl)**: 42A.
- Läck, A.K., Dubois, D.W., Diaz, M.R., Anderson, N.J., and McCool, B.A. (2006) Chronic ethanol and withdrawal induces glutamatergic synaptic adaptations in the lateral/basolateral amygdala. *Alcohol. Clin. Exper. Res.* **30(6-suppl)**: 48A.
- Anderson, N.J., Chappell, A.M., and McCool, B.A. (2007) Early social experience modulates genetic responses to ethanol self-administration: a pilot study. *Alcohol Clin Exper Res.* **31(6-suppl)**: 14A.
- Chappell, A.M., and McCool, B.A. (2007) Juvenile social isolation enhances ethanol consumption during operant self-administration. *Alcohol Clin Exper Res.* **31(6-suppl)**: 22A.
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COMMUNITY ACTIVITIES AND SERVICE:

- Coaching Assistant, Southwest Little League “Fall Ball”, 2007 (10yo), Clemmons North Carolina
- “Little League” Baseball Coach, 2000-2001, Coach-pitch (8-9yo), Bryan Texas
- Stewardship Chairman, 2001, St. Thomas Episcopal Church, College Station Texas

PERSONAL INTERESTS:

Reading; outdoor activities including golf, fishing, and camping; home repair projects