

CURRICULUM VITAE

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EDUCATION/TRAINING

- 1981-1985 Bachelor's Degree (B.A.): Dept. of Biology. Gustavus Adolphus College, St. Peter, MN
- 1987-1992 Doctoral Degree (Ph.D.) Dept. of Anatomy & Neurobiology, University of Tennessee Health Science Center, Memphis TN;
Dissertation Title: "Histaminergic Modulation of Immunohistochemically Identified Vasopressin Neurons in the Rat Supraoptic Nucleus".
Advisor: William E. Armstrong, Ph.D.
Thesis Committee: William E. Armstrong, Ph.D., William R. Crowley, Ph.D., Robert C. Foehring, Ph.D., Hitoshi Kita, Ph.D., Kafait U. Malik, Ph.D.
- 1992-1995 Postdoctoral Fellow, Neurophysiology/Epilepsy, Colorado State University, Fort Collins, CO, Dept. of Anatomy & Neurobiology.
Advisor: F. Edward Dudek, Ph.D.
- 1995-1998 Postdoctoral Research Associate, Neurophysiology/Epilepsy, Colorado State University, Dept. of Anatomy & Neurobiology
Advisor: F. Edward Dudek, Ph.D.
- 1998 Postdoctoral Research Associate, Hypothalamic Neurophysiology, Dept. of Anatomy & Neurobiology, Colorado State University,
Advisors: F. Edward Dudek, Ph.D., Gary E. Pickard, Ph.D.

PROFESSIONAL EXPERIENCE

- 06/84-09/84 Research Assistant/Normal Volunteer, National Institutes of Health
- 10/84-06/85 Undergraduate Research, Gustavus Adolphus College

- 08/87-09/92 Graduate Teaching Assistant, Dept. of Anatomy & Neurobiology
University of Tennessee Health Science Center
- 09/92-10/95 Postdoctoral Fellow, Dept. of Anatomy & Neurobiology, Colorado State
University
- 10/95-09/98 Postdoctoral Research Associate, Dept. of Anatomy & Neurobiology
Colorado State University
- 10/98-06/99 Assistant Professor (Research), Dept. of Anatomy & Neurobiology
Colorado State University
- 07/99-06/04 Assistant Professor, Dept. Cell & Molecular Biology, Tulane University
- 07/01-06/06 Adjunct Assistant Professor, Dept. Neurosurgery, Tulane Univ. School of
Medicine
- 07/04-06/06 Associate Professor, Dept. Cell & Molecular Biology and the
Neuroscience Graduate Training Program, Tulane University
- 07/06-present Adjunct Associate Professor of Cell & Molecular Biology, Tulane
University
- 07/06-present Associate Professor, Dept. Physiology, College of Medicine, University of
Kentucky

HONORS AND AWARDS

- 10/84-6/85 Undergraduate Research Award : Sigma Xi
- 8/87-7/88 Predoctoral Fellowship: Dept. of Anatomy and Neurobiology, Univ. Tenn.
- 8/88-8/92 Predoctoral Fellowship: State of Tennessee Neuroscience Center of
Excellence
- 7/89-8/92 NIH Predoctoral NRSA: NIMH, F31-MH09933 "Histaminergic control of
neuroendocrine function"
- 9/92-9/95 NIH Postdoctoral NRSA: NINDS F32-NS09289 "Ontogeny and
mechanisms of CRH-induced seizure activity"
- 7/96-6/97 American Heart Association, Colorado/Wyoming Affiliate: Postdoctoral
Fellowship CFWF0396; "Mechanism of glutamate-mediated activation of
vasopressin neurons"
- 2000-2001 Georges M. Lurcy Grant Program; Research Grants for Tulane College
Students (S. Misra and R. Tompkins).
- 2001-2002 Georges M. Lurcy Grant Program; Research Grants for Tulane College
Students (J. Fernandez, C. Hasney, T. Kubal, J.L. LaFleur).
- 2002-2003 Georges M. Lurcy Grant Program; Research Grants for Tulane College
Students (J. Fernandez, T. Kubal).
- 2002-2003 Newcomb Foundation Grant, Newcomb Fellows Program (C. Poole)
- 2003-2004 Mortarboard citation for teaching excellence, Newcomb College, Tulane
University
- 2004, 2005 Outstanding Funded LAS Faculty Award, LAS Dean, Tulane University
- 2007-2010 Wethington Award for Excellence in Research, UK

RESEARCH INTERESTS

Synaptic organization of brain systems controlling visceral/autonomic functions in metabolic disorders; synaptic reorganization and modulation in temporal lobe epilepsy

PUBLICATIONS (PEER REVIEWED)

1. **Smith**, B.N. and Armstrong, W.E. (1990) Tuberal supraoptic neurons--I: Morphological and electrophysiological characteristics observed with intracellular recording and biocytin filling *in vitro*. *Neuroscience*, 38:469-483.
2. Armstrong, W.E. and **Smith**, B.N. (1990) Tuberal supraoptic neurons--II: Electrotonic properties. *Neuroscience*, 38:485-494.
3. Nelson, R.J., **Smith**, B.N. and Douglas, V.D. (1991) Relationships between sensory responsiveness and premovement activity of quickly adapting neurons in areas 3b and 1 of monkey primary somatosensory cortex. *Exp. Brain Res.*, 85:75-90.
4. **Smith**, B.N. and Armstrong, W.E. (1993) Histamine enhances the depolarizing afterpotential of immunohistochemically identified vasopressin neurons in the rat supraoptic nucleus via H₁-receptor activation. *Neuroscience*, 53:855-864.
5. Armstrong, W.E., **Smith**, B.N., and Tian, M. (1994) Electrophysiological characteristics of immunohistochemically identified oxytocin and vasopressin neurons *in vitro*. *J. Physiol. (Lond.)*, 475:115-128.
6. **Smith**, B.N. and Dudek, F.E. (1994) Age-related epileptogenic effects of corticotropin-releasing hormone in the isolated CA1 region of rat hippocampal slices. *J. Neurophysiol.*, 72:2328-2333.
7. **Smith**, B.N. and Armstrong, W.E. (1996) The ionic dependence of the histamine-induced depolarization of vasopressin neurons in the rat supraoptic nucleus. *J. Physiol. (Lond.)*, 495:465-478.
8. **Smith**, B.N. and Dudek, F.E. (1996) Amino acid-mediated regulation of spontaneous synaptic activity patterns in the rat basolateral amygdala. *J. Neurophysiol.*, 76:1958-1967.
9. **Smith**, B.N. and Dudek, F.E. (1997) Enhanced population responses in the basolateral amygdala of kainate-treated, epileptic rats *in vitro*. *Neurosci. Letts.*, 222:1-4.
10. **Smith**, B.N., Dou, P., Barber, W.D., and Dudek, F.E. (1998) Vagally-evoked synaptic activity in the immature rat nucleus tractus solitarius in an intact *in vitro* preparation. *J. Physiol. (Lond.)*, 512:149-162.
11. Pickard, G.E., **Smith**, B.N., Belenky, M., Rea, M.A., Dudek, F.E., Sollars, P.J. (1999) 5-HT_{1B} receptor-mediated presynaptic inhibition of retinal input to the suprachiasmatic nucleus. *J. Neurosci.*, 19:4034-4045.
12. **Smith**, B.N., Choi, B.-J., Roper, S.N., and Dudek, F.E. (1999) Electrophysiological responses in vivo of hippocampal CA1 pyramidal neurons in an animal model of neuronal migration disorders. *Dev. Neurosci.*, 21:374-384.
13. **Smith**, B.N., Dudek, F.E., and Roper, S.N. (1999) Synaptic responses of neurons in heterotopic gray matter in an animal model of cortical dysgenesis. *Dev. Neurosci.*, 21:365-373.
14. **Smith**, B.N., Banfield, B., Smeraski, C.A., Wilcox, C.L., Dudek, F.E., Enquist, L.W., and Pickard, G.E. (2000) Pseudorabies virus expressing enhanced green fluorescent protein: a tool for *in vitro* electrophysiological analysis of transsynaptically labeled neurons in identified central nervous system circuits *Proc. Natl. Acad. Sci. (USA)*, 97:9264-9269.
15. Suter, K.S., Wuarin, J.-P., **Smith**, B.N., Dudek, F.E., and Moenter, S.M. (2000) Whole-cell recordings from preoptic/hypothalamic slices reveal burst firing in

gonadotropin-releasing hormone neurons identified with green fluorescent protein in transgenic mice. *Endocrinology*, 141:3731-3736.

16. **Smith**, B.N. and Dudek, F.E. (2001) Short- and long-term changes in CA1 network excitability after kainate treatment in rats. *J. Neurophysiol.*, 85:1-9.

17. **Smith**, B.N., Dudek, F.E., Sollars, P.J., and Pickard, G.E. (2001) Serotonergic modulation of retinal input to the mouse suprachiasmatic nucleus mediated by 5-HT_{1B} and 5-HT₇ receptors. *J. Biol. Rhythms*, 16:25-38.

18. **Smith**, B.N. and Dudek, F.E. (2002) Network interactions mediated by new excitatory connections between CA1 pyramidal cells in rats with kainate-induced epilepsy. *J. Neurophysiol.*, 87:1655-1658.

19. Shibley, H. and **Smith**, B.N. (2002) Pilocarpine-induced status epilepticus results in mossy fiber sprouting and spontaneous seizures in C57BL/6 and CD-1 mice. *Epilepsy Res.*, 49:109-120.

20. **Smith**, B.N., Davis, S.F., van den Pol, A.N., and Xu, W. (2002) Selective enhancement of excitatory synaptic activity in the rat nucleus tractus solitarius by hypocretin 2. *Neuroscience*, 115:707-714.

21. Davis, S.F., Williams, K.W., Xu, W., Glatzer, N.R., and **Smith**, B.N. (2003) Selective enhancement of synaptic inhibition by hypocretin (orexin) in rat vagal motor neurons: Implications for autonomic regulation. *J. Neurosci.*, 23:3844-3854.

22. Glatzer, N.R., Hasney, C.P., Bhaskaran, M.D., and **Smith**, B.N. (2003) Synaptic and morphological properties in vitro of premotor rat nucleus tractus solitarius neurons labeled transneuronally from the stomach. *J. Comp. Neurol.*, 464:525-539.

23. Winokur, R.S., Kubal, T., Liu, D., Davis, S.F., and **Smith**, B.N. (2004) Recurrent excitation in the dentate gyrus of a murine model of temporal lobe epilepsy. *Epilepsy Res.* 58:93-105.

24. Davis, S.F., Derbenev, A.V., Williams, K.W., Glatzer, N.R., and **Smith**, B.N. (2004) Convergent excitatory and inhibitory local circuit input to the rat dorsal motor nucleus of the vagus originating from the nucleus tractus solitarius. *Brain Res.* 1017:208-217.

25. Derbenev, A.V., Stuart, T.C., and **Smith**, B.N. (2004) Cannabinoids suppress synaptic input to neurones of the rat dorsal motor nucleus of the vagus nerve. *J. Physiol. (Lond.)* 559:923-938.

26. Glatzer, N.R. and **Smith**, B.N. (2005) Modulation of synaptic transmission in the rat nucleus of the solitary tract by endomorphin-1. *J. Neurophysiol.* 93:2530-2540.

27. Williams, K.W. and **Smith**, B.N. (2006) Rapid inhibition of neural excitability in the nucleus tractus solitarii by leptin: implications for ingestive behaviour. *J. Physiol (Lond)* 573:395-412.

28. Derbenev, A.V., Monroe, M.J., Glatzer, N.R., and **Smith**, B.N. (2006) Vanilloid-mediated heterosynaptic facilitation of inhibitory input to neurons of the rat dorsal motor nucleus of the vagus. *J. Neurosci.* 26:9666-9672.

29. Williams, K.W., Zsombok, A., and **Smith**, B.N. (2007) Rapid inhibition of neurons in the dorsal motor nucleus of the vagus by leptin. *Endocrinology* 148:1868-1881.

30. Glatzer, N.R., Derbenev, A.V., Banfield, B.W., and **Smith**, B.N. (2007) Endomorphin-1 modulates intrinsic inhibition in the dorsal vagal complex. *J Neurophysiol.* 98:1591-9.

31. Chen, J., Paudel, K.S., Derbenev, A.V., **Smith**, B.N., and Stinchcomb, A.L. (2009) Simultaneous Quantification of Anandamide and Other Endocannabinoids in Dorsal Vagal Complex of Rat Brainstem by LC-MS. *Chromatographia.* 69:1-7.

32. Duale, H., Hou, S., Derbenev, A.V., **Smith**, B.N., and Rabchevsky, A.G. (2009) Spinal cord injury reduces the efficacy of pseudorabies virus labeling of sympathetic preganglionic neurons. *J Neuropath Exp Neurol.* 68:168-78.

33. Gao, H. Glatzer, N.R., Williams, K.W., Derbenev, A.V., Liu, D., and Smith, B.N. (2009) Morphological and electrophysiological features of motor neurons and putative interneurons in the dorsal vagal complex of rats and mice. *Brain Res.* 1291:40-52.
34. Hunt, R.F., Scheff, S.W., and **Smith, B.N.** (2009) Posttraumatic epilepsy after controlled cortical impact injury in mice. *Exp. Neurol.* 215(2):243-52.
35. Bhaskaran, M.D. and **Smith, B.N.** (2010) Effects of TRPV1 activation in the dentate gyrus of a mouse model of TLE. *Exp. Neurol.* 223:529-36.
36. Bhaskaran, M.D. and **Smith, B.N.** (2010) Cannabinoid modulation of excitability in the dentate gyrus of pilocarpine-treated epileptic mice. *PLoS ONE.* 5:e10683 (1-10).
37. Derbenev, A.V., Duale, H., Rabchevsky, A.G. and **Smith, B.N.** (2010) Electrophysiological characteristics of identified kidney-related neurons in adult rat spinal cord slices. *Neurosci Letts.* 474:168-172.
38. Gao, H. and **Smith, B.N.** (2010) Tonic GABA-mediated inhibition in the rat dorsal motor nucleus of the vagus. *J. Neurophysiol.* 103:904-14.
39. Gao, H. and **Smith, B.N.** (2010) Zolpidem effects on GABA currents in the rat dorsal motor nucleus of the vagus. *Neuropharmacology.* 58:1220-1227.
40. Hunt, R.F., Scheff, S.W., and **Smith, B.N.** (2010) Regionally localized recurrent excitation in the dentate gyrus of a cortical contusion model of posttraumatic epilepsy. *J. Neurophysiol.* 103:1490-1500.
41. Duale, H., Lyttle, T.S. and **Smith B.N.**, Rabchevsky, A.G. (2010) Noxious colorectal distention in spinalized rats reduces pseudorabies virus labeling of sympathetic neurons. *J. Neurotrauma.* In Press.
42. Zsombok, A., Tasker, J.G., and **Smith, B.N.** Dexamethasone and anandamide biphasically alter mEPSC frequency in gastric-related preautonomic PVN neurons. In revision.
43. Hunt, R.F., Scheff, S.W., and **Smith, B.N.** Increased local excitatory input to hilar GABAergic interneurons accompanies reduced synaptic inhibition of granule cells after traumatic brain injury. Submitted.
44. Derbenev, A.V., Gyarmati, P., Blake, C., Yang, S., and **Smith, B.N.** Dexamethasone induces cannabinoid and vanilloid mediated changes in GABAergic input to neurons of the dorsal motor nucleus of the vagus. In Preparation.
45. Gyarmati, P. and **Smith, B.N.** Glucose sensing in the nucleus tractus solitarius is mediated by GABAergic neurons. In preparation.
46. Zsombok, A., Derbenev, A.V., Bhaskaran, M.D., and **Smith, B.N.** Insulin positively modulates TRPV1 function via a PI3K- and PKC-dependent mechanism in the vagal complex of type 1 diabetic mice. In Preparation.

CHAPTERS AND REVIEWS

1. **Smith, B.N.** and Dudek, F.E. (1998) Intracellular recording in hypothalamic cells that regulate neuroendocrine function. In: *Methods in Neuroendocrinology, The Cellular and Molecular Neuropharmacology Series.* L.D. Van de Kar, ed., CRC Press, Boca Raton, FL, pp. 95-113.
2. Dudek, F.E., **Smith, B.N.**, Suter, K.J., and Wuarin, J.-P. (1999) Electrophysiology of hypothalamic neurons. In: *Neuroendocrinology in Physiology and Medicine.* P.M. Conn and M.E. Freeman, eds., The Humana Press, Inc., Totowa, NJ, pp. 527-539.
3. Suter, K.J., **Smith, B.N.**, and Dudek, F.E. (1999) Electrophysiological recording from brain slices. *Methods,* 18:86-90.
4. Dudek, F.E., Wuarin, J.-P., **Smith, B.N.**, and Hellier, J.L. (2000) In vitro electrophysiological studies on the mechanisms of epileptogenesis using human and

animal brain slices. In: Epilepsy Surgery. H.O. Luders and Y. Comair, eds., Lippincott Williams & Wilkins, New York, NY, pp. 927-934.

5. Zsombok, A. and **Smith, B.N.** (2009) Plasticity of central autonomic neural circuits in diabetes. *Biochim Biophys Acta: Molecular Basis of Disease*. 1792:423-431

ABSTRACTS AND PROCEEDINGS

1. **Smith, B.N.** and Armstrong, W.E. (1988) Intracellular labeling of electrophysiologically identified neurons in the tuberal portion of the supraoptic nucleus. *Soc. Neurosci. Abstr.*, 14:1180.

2. **Smith, B.N.** and Armstrong, W.E. (1990) The effects of histamine on the membrane potential of rat magnocellular supraoptic neurons recorded intracellularly *in vitro*. *Soc. Neurosci. Abstr.*, 16: 68.

3. Armstrong, W.E., **Smith, B.N.**, and Tian, M. (1991) Electrophysiological differences between identified oxytocin and vasopressin neurons recorded intracellularly from rat supraoptic nucleus *in vitro*. *Soc. Neurosci. Abstr.*, 17:1189.

4. **Smith, B.N.** and Armstrong, W.E. (1991) The effects of histamine on immunocytochemically identified vasopressin neurons in rat supraoptic nucleus recorded intracellularly *in vitro*. *Soc. Neurosci. Abstr.*, 17:1189.

5. **Smith, B.N.** and Dudek, F.E. (1993) Age-related epileptogenic effects of corticotropin releasing hormone on evoked field responses in the isolated CA1 pyramidal cell layer of rat hippocampal slices. *Soc. Neurosci. Abstr.*, 19:1464.

6. Armstrong, W.E. and **Smith, B.N.** (1994) Ionic dependence of the depolarizing afterpotential (DAP) in vasopressin neurons: Enhancement by histamine. *Soc. Neurosci. Abstr.*, 20:1177.

7. **Smith, B.N.** and Dudek, F.E. (1994) Patch-clamp analysis of spontaneous synaptic currents in the rat basolateral amygdala. *Soc. Neurosci. Abstr.*, 20:1509.

8. **Smith, B.N.** and Dudek, F.E. (1995) Hyperexcitability in the basolateral amygdala of kainate-treated rats. *Soc. Neurosci. Abstr.*, 21:987.

9. **Smith, B.N.** and Dudek, F.E. (1995) Decreased inhibition in the basolateral amygdala of kainate-treated rats. *Epilepsia*, 36 (Suppl. 4): 40.

10. **Smith, B.N.**, Dou, P., Barber, W.D., and Dudek, F.E. (1996) Synaptic currents in the rat nucleus of the solitary tract evoked by vagus nerve stimulation *in vitro*. *Soc. Neurosci. Abstr.*, 22:1800.

11. **Smith, B.N.** and Dudek, F.E. (1997) Synchronized burst activity in the isolated hippocampal CA1 region of kainate-treated, epileptic rats. *Soc. Neurosci. Abstr.*, 23:2153.

12. **Smith, B.N.** and Dudek, F.E. (1997) Decreased inhibition and synchronized bursting in the isolated hippocampal CA1 region of kainate-treated, epileptic rats. *Epilepsia*, 38:33.

13. Pickard, G.E., Belenky, M., **Smith, B.N.**, Rea, M.A., Dudek, F.E., Sollars, P.J. (1998) 5-HT_{1B} receptor-mediated presynaptic inhibition of retinal input to the suprachiasmatic nucleus. *FASEB Summer Research Conference*.

14. Pickard, G.E., **Smith, B.N.**, Mitchell, T.W., and Dudek, F.E. (1998) 5-HT_{1B} receptor-mediated presynaptic inhibition of retinal input to the golden hamster suprachiasmatic nucleus *in vitro*. *Soc. Neurosci. Abstr.*, 24:1185.

15. Roper, S.N., **Smith, B.N.**, and Dudek, F.E. (1998) Recurrent excitatory activity in experimental heterotopic grey matter. *Soc. Neurosci. Abstr.*, 24:2140.

16. Roper, S.N., **Smith, B.N.**, and Dudek, F.E. (1998) Evidence for recurrent excitatory activity in experimental heterotopic grey matter. *Epilepsia*, 39,S6:29-30.

17. **Smith**, B.N., Sampson, T.L., and Dudek, F.E. (1998) Morphological correlates of synaptic responses in immature neurons of the rat nucleus tractus solitarius. *Soc. Neurosci. Abstr.*, 24:869.
18. Pickard, G.E., **Smith**, B.N., Dudek, F.E., and Sollars, P.J. (1999) Serotonergic modulation of retinal input to the suprachiasmatic nucleus (SCN). *Soc. Neurosci. Abstr.*, 25:1133.
19. **Smith**, B.N. and van den Pol, A.N. (1999) Modulation of synaptic activity by hypocretin (orexin) in the rat dorsal vagal complex in vitro. *Soc. Neurosci. Abstr.*, 25:1120.
20. **Smith**, B.N., Andresen, M.C., Bonham, A.C., and Mifflin, S.W. (2000) Synaptic physiology of central autonomic function. *Soc. Neurosci. Abstr.*, 26:2084.
21. Glatzer, N.R., Hasney, C.P., Xu, W., and **Smith**, B.N. (2001) Synaptic and morphological properties of gastric-related rat nucleus tractus solitarius neurons identified by retrograde transneuronal viral labeling. *Soc. Neurosci. Abstr.* 27:839.2.
22. Xu, W. and **Smith**, B.N. (2001) Hypocretin-mediated enhancement of synaptic inhibition in stomach projecting vagal neurons identified by a retrograde viral label reporting GFP. *Soc. Neurosci. Abstr.* 27:839.1.
23. Ball, A.J., Derbenev, A.V., **Smith**, B.N., and Hornby, P.J. (2002) Dorsal vagal complex as the site of action for the gastric motor effects of Δ^9 -THC. *Dig. Dis. Wk.*
24. Davis, S.F., Williams, K.W., and **Smith**, B.N. (2002) An inhibitory connection between sensory and motor nuclei of the rat vagal complex the is enhanced by hypocretin. *Soc. Neurosci. Abstr.* 28:637.13.
25. Derbenev, A.V., Stuart, T.C. and **Smith**, B.N. (2002) Alteration of synaptic transmission by cannabinoids in rat brainstem vagal complex. *Soc. Neurosci. Abstr.* 28:830.2.
26. Glatzer, N. R. and Smith, B.N. (2002) Endomorphins reduce solitary tract-evoked and spontaneous synaptic activity in the rat nucleus tractus solitarius. *Soc. Neurosci. Abstr.* 28:643.16.
27. Winokur, R.S., Davis, S.F., and **Smith**, B.N. (2002) Mossy fiber sprouting and recurrent excitatory circuit formation in the dentate gyrus of C57BL/6 and CD1 mice after pilocarpine-induced seizures. *Epilepsia* 43:1.048.
28. Davis, S.F. and **Smith**, B.N. (2003) Differential effects of hypocretin 1 and 2 on synaptic activity within the rat NTS. *Soc. Neurosci. Abstr.* 29:502.15.
29. Derbenev, A.V. and **Smith**, B.N. (2003) Endocannabinoids interact with CB1 and VR1 receptors on GABAergic synaptic terminals contacting rat vagal motor neurons. *Soc. Neurosci. Abstr.* 29:502.17.
30. Glatzer, N.R. and **Smith**, B.N. (2003) Endomorphins reduce evoked and spontaneous synaptic activity in the rat dorsal motor nucleus of the vagus in vitro. *Soc. Neurosci. Abstr.* 29:502.11.
31. Stuart, T.C., Gallagher, K.L., Turenius, C.I., and **Smith**, B.N. (2003) Identification of divergent autonomic neural circuits linking the stomach and the duodenum. *Soc. Neurosci. Abstr.* 29:502.2.
32. Williams, K.W. and **Smith**, B.N. (2003) Inhibition of nucleus tractus solitarius neurons by leptin. *Soc. Neurosci. Abstr.* 29:502.16.
33. Derbenev, A.V., Monroe, M.J., and **Smith**, B.N. (2004) Activation of VR1 receptors on GABAergic and glutamatergic synaptic terminals contacting neurons in the rat dorsal motor nucleus of the vagus by endocannabinoids. *Soc. Neurosci. Abstr.* 30:891.3.
34. Gao, H., Glatzer, N.R., and **Smith**, B.N. (2004) Properties of neurons in the dorsal motor nucleus of the vagus nerve retrogradely labeled after PRV152 inoculation of gastric vagal terminals. *Soc. Neurosci. Abstr.* 30:891.2.

35. Glatzer, N.R., Derbenev, A.V., and **Smith, B.N.** (2004) Endomorphin-1 reduces the activity of identified GABA neurons in the nucleus of the solitary tract in vitro. *Soc. Neurosci. Abstr.* 30:891.19.
36. **Smith, B.N.** and Bhaskaran, M.D. (2004) Cannabinoid modulation of excitability in the dentate gyrus of pilocarpine-treated epileptic mice. *Soc. Neurosci. Abstr.* 30:479.9.
37. **Smith, B.N.** and Bhaskaran, M.D. (2004) Cannabinoid modulation of excitability in the dentate gyrus of pilocarpine-treated epileptic mice. *Epilepsia* 45 (suppl 7):204.
38. Williams, K.W. and **Smith, B.N.** (2004) Leptin hyperpolarizes rat nucleus tractus solitarius neurons via a putative K⁺ conductance. *Soc. Neurosci. Abstr.* 30:891.18.
39. Bhaskaran M.D. and **Smith B.N.** (2005) Cannabinoid modulation of recurrent excitatory circuits activated by glutamate photolysis in the dentate gyrus of pilocarpine treated mice. *Soc. Neurosci. Abstr.* 31:782.11.
40. Derbenev, A.V. and **Smith, B.N.** (2005) Dexamethasone rapidly induces vanilloid receptor-mediated enhancement of GABAergic input to neurons of the rat dorsal motor nucleus of the vagus. *Soc. Neurosci. Abstr.* 31:729.15
41. Williams, K.W. and **Smith, B.N.** (2005) Leptin inhibits neurons in the rat dorsal motor nucleus of the vagus nerve. *Soc. Neurosci. Abstr.* 31:764.10
42. Gao, H. and **Smith, B.N.** (2006) Benzodiazepine effects on GABA currents in the rat dorsal motor nucleus of the vagus. *Soc. Neurosci Abstr.* 32:739.1
43. Bhaskaran, M.D. and **Smith, B.N.** (2007) Cannabinoid and vanilloid interactions in the dentate gyrus of a mouse model of temporal lobe epilepsy. *Soc. Neurosci Abstr.* 33:257.20.
44. Bhaskaran, M.D. and **Smith, B.N.** (2007) Cannabinoid and vanilloid interactions in the modified dentate gyrus of a pilocarpine-induced status epilepticus mouse model of temporal lobe epilepsy. *Epilepsia* 48 (S6):118.
45. Derbenev, A.V. and **Smith, B.N.** (2007) Dexamethasone induces cannabinoid and vanilloid mediated changes in GABAergic input to neurons of the dorsal motor nucleus of the vagus. *17th Neuropharm. Conf.* P1.2.15.
46. Derbenev, A.V. and **Smith, B.N.** (2007) Membrane properties and trpv1-mediated modulation of synaptic inputs in identified kidney-related presympathetic RVLM neurons. *Soc. Neurosci Abstr.* 33:417.9.
47. Duale H., Hou S., Derbenev A., **Smith B.N.** and Rabchevsky A.G. (2007) Intraspinal plasticity and autonomic dysreflexia after spinal cord injury: a transneuronal tracing study using pseudorabies virus. *J. Neurotrauma* 24(7):1260.
48. Gao, H. and **Smith, B.N.** (2007) Tonic GABA-mediated inhibition in the rat dorsal motor nucleus of the vagus. *Soc. Neurosci Abstr.* 33:521.20.
49. Hou, S.P., Duale, H., Derbenev, A. V., **Smith, B. N.**, Rabchevsky, A. G. (2007). Propriospinal neuron plasticity after spinal cord transection is associated with the development of autonomic dysreflexia. *Neurorehabil Neural Repair* 21(6): 611
50. Hunt, R.F., Bhaskaran, M.D., Stephens, L.B., and **Smith, B.N.** (2007) Epileptiform activity with low to moderate mossy fiber sprouting in the dentate gyrus of FVB/N mice following pilocarpine-induced status epilepticus. *Epilepsia* 48 (S6):296.
51. Zsombok, A., Tasker, J.G., and **Smith, B.N.** (2007) Dexamethasone and anandamide biphasically alter mEPSC frequency in gastric-related pre-autonomic PVN neurons. *Soc. Neurosci Abstr.* 33: 521.10.
52. Duale, H., Hou, S.P., Derbenev, A.V., **Smith, B.N.** and Rabchevsky, A.G. (2008) Severe spinal cord injury dramatically reduces the efficacy of pseudorabies virus labeling of sympathetic preganglionic neurons. 2008 KSHIRTmeeting
53. Hunt, R.F., Scheff, S. W. and **Smith, B.N.** (2008) Seizures and long term changes in network excitability in the dentate gyrus of mice after experimental brain injury. *Soc. Neurosci Abstr.* 34:250.1

54. Hunt, R.F., Scheff, S. W. and **Smith, B.N.** (2008) Seizures and recurrent excitatory connections in the dentate gyrus of mice after controlled cortical impact injury. *Epilepsia* 49 (S7).
55. Zsombok, A., Derbenev, A.V., Bhaskaran, M.D., and **Smith, B.N.** (2008) Plasticity of synaptic input to brainstem neurons in a model of type 1 diabetes. *Soc. Neurosci Abstr.* 34:281.23.
56. Adams, J.M., McCarthy, J.J., Derbenev, A., **Smith, B.N.**, Stocker, S.D. (2009). Activation of transient receptor potential vanilloid-1 (TRPV1) channels in the rostral ventrolateral medulla (RVLM) produces renal sympathoinhibition. *FASEB J.* 2009 23:610.10.
57. Derbenev, A., Stocker, S.D., **Smith, B.N.** (2009). TRPV1-Mediated modulation of synaptic inputs in identified kidney-related sympathetic premotor neurons in the rostral ventrolateral medulla. *FASEB J.* 2009 23:LB139.
58. Duale, H. **Smith, BN**, Rabchevsky, A.G. (2009) Colorectal distension in spinalized rats reduces the efficacy of pseudorabies virus labeling of kidney-related sympathetic preganglionic neurons. *Natl Neurotrauma Soc.*
59. Hunt RF, Haselhorst LA, Bach EC, Rios-Pilier J, Schoch KM, Scheff SW, Saatman KE, and **Smith BN** (2009) Posttraumatic epileptogenesis is associated with injury severity after cortical contusion in mice. *Epilepsia* 50.
60. Hunt RF, Haselhorst LA, Bach EC, Rios-Pilier J, Schoch KM, Scheff SW, Saatman KE, and **Smith BN** (2009) Relationship between injury severity and posttraumatic epileptogenesis after controlled cortical impact in mice. *Soc. Neurosci Abstr.* 35:
61. Hunt, R.F., Scheff, S.W., **Smith, B.N.** (2009) Localized recurrent excitation in the dentate gyrus of a cortical contusion model of posttraumatic epilepsy. *Epilepsia* 50.
62. Bach, E. and **Smith, B.N.** (2010) Facilitation of glutamate release through presynaptic NMDA receptors in the DMV. *Soc. Neurosci Abstr.* 36:
63. Blake, C.B. and **Smith, B.N.** (2010) Inhibitory effects of insulin in the dorsal motor nucleus of the vagus *Soc. Neurosci Abstr.* 36:
64. Gyarmati, P. and **Smith, B.N.** (2010) Effects of elevated glucose concentration on electrical properties of GABAergic neurons in the nucleus tractus solitarius *Soc. Neurosci Abstr.* 36:
65. Hunt, R.F., Scheff, S.W., **Smith, B.N.** (2010) Excitatory input to hilar gabaergic interneurons is enhanced after traumatic brain injury. *Natl Neurotrauma Soc.* #1584650
66. Hunt, R.F., Scheff, S.W., **Smith, B.N.** (2010) Hilar GABAergic interneurons receive increased excitatory inputs from granule cells and pyramidal neurons after traumatic brain injury. *Epilepsia* 51.

RESEARCH FUNDING

Current funding

"Glucocorticoids and endocannabinoids in vagal complex"

Agency: National Institutes of Health, NIDDK/NINDS

Type: Research Project Grant R01 DK080101-02

Role on project: PI

Total Direct: \$1,132,500

Dates: 2/09-11/13

Objective: To identify effect of glucocorticoid actions endogenous cannabinoids at CB1R and VR1 in the vagal complex

"Neural Circuitry in the Dorsal Vagal Complex"

Agency: National Institutes of Health, NIDDK/NINDS

Type: Research Project Grant #R01 DK056132-07

Role on project: PI

Total Direct: \$1,132,500

Dates: 07/09-06/14

Objective: To identify the mechanisms and patterns of amino acid-mediated neural connections between neurons in the NTS, identified as gastric-related by transynaptic viral labeling.

“Responsiveness to nicotine of nucleus tractus solitarius neurons”

Agency: National Institutes of Health, NIDDK/NINDS

Type: Research Project Grant #R01 DK082625-01

Role on project: Co-PI (V. Uteshev, PI)

Total Direct: \$250,000

Dates: 09/09-08/14

Objective: To identify the mechanisms by which nicotine modulates specific synaptic connections in the NTS.

Pending/Planned grant applications

“Insulin effects in the vagal complex”

Role on Project: Sponsor (C. Blake)

Agency: NIH (NIDDK)

Dates: 12/10-11/13

Type: F32 Postdoctoral NRSA

Objective: To examine the effects of insulin on vagal complex neurons related to gastrointestinal control.

“JAK/STAT inhibition to prevent post-traumatic epileptogenesis”

Role on project: PI (multi-PI grant with A. Brooks-Kayal and L. Frey)

Agency: DOD

Type CDMRP: Peer Reviewed Medical Research Program

Objective: To identify effects of JAK/STAT inhibition on the progression of epileptogenesis after head injury.

“Prophylaxis for post-traumatic epilepsy based on differentiating causal attributes of cell loss, cell proliferation, and synaptic reorganization”

Role on project: PI

Agency: DOD

Type CDMRP: Concept award

Objective: To identify effects of IGF-1 on the progression of epileptogenesis after head injury.

“Mechanisms of posttraumatic epilepsy development in mice”

Role on Project: PI

Agency: NIH

Type:

Submission planned 2010

Objective: To study cellular correlates of epileptogenesis in models of non-penetrating head injury in the rodent dentate gyrus and hippocampus.

Recently completed funding

“Peptidergic modulation of GABA neurons in the dorsal vagal complex”

Role on project: PI

Agency: National Science Foundation

Type: Grant – Functional and Regulatory Systems Cluster #IOB-0518209

Total Funds: \$310,000

Dates: 08/05-07/09

Objective: To identify effects of mu-opioids on electrical properties of identified GABA neurons in the NTS.

“Cannabinoid modulation of epileptiform activity in mice”

Role on project: PI

Agency: National Institutes of Health, National Institute of Neurological Disease and Stroke

Type: Exploratory/Developmental Research Grant R21 NS052302

Total Direct: \$250,000

Dates: 07/05-06/09

Objective: To identify mechanisms by which cannabinoid agonists modulate neural excitability in the dentate gyrus of a mouse model of temporal lobe epilepsy.

“Intraspinal Plasticity contributing to Autonomic Dysreflexia following SCI”

Role on Project: Co-investigator (Hanad Duale)

Agency: PVA Research Foundation Grant # 2561

Type: Postdoctoral Fellowship

Dates: 01/08-09/09

Objective: To identify neurons in spinal cord that mediate reflexive blood pressure increases after bowel stimulation.

“Posttraumatic epileptiform activity following controlled cortical impact in mice”

Role on Project: Advisor (Robert F Hunt, PI)

Agency: Epilepsy Foundation of America

Type: Predoctoral Fellowship

Dates: 01/08-12/08

Objective: To study the relationship between non-penetrating head injury and mossy fiber sprouting, synaptic reorganization and enhanced synaptic excitability in the dentate gyrus.

“Glucocorticoid actions in the brainstem”

Role on project: PI

Agency: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases

Type: Supplement (SCRO) to DK056132-04 (CoPI Jeffrey Tasker)

Total Direct: \$150,000

Dates: 9/04-05/07

Objective: To identify mechanisms of glucocorticoid modulation of synaptic input to brainstem and hypothalamic neurons regulating the stomach.

“Cannabinoid modulation of excitability in the dentate gyrus of the epileptic mouse”

Role on project: PI

Agency: Epilepsy Foundation of America

Type: Research Grant

Total Direct: \$40,000

Dates: 07/04-06/05

Objective: To identify the mechanisms by which cannabinoid agonists modulate neural excitability in the dentate gyrus of a mouse with pilocarpine-induced temporal lobe epilepsy.

"Peptidergic Modulation of Synaptic Circuitry in the Dorsal Vagal Complex"

Role on project: PI

Agency: National Science Foundation

Type: Grant – Neuronal and Glial Mechanisms Program; #IBN-0080322

Total Funds: \$328,538

Dates: 07/00-06/04

Objective: To identify mechanisms by which the neuropeptide hypocretin (orexin) effects synaptic connectivity in the dorsal vagal complex.

"Functional GABAergic Circuitry Involved in Cardiovascular Regulation"

Role on project: PI

Agency: American Heart Association, National Center

Type: Scientist Development Grant, #0030284N

Total funds: \$259,444

Dates: 01/00-12/04

Objective: To identify the mechanisms by which local GABAergic synaptic circuitry in the medial nucleus tractus solitarius (mNTS) in the brainstem contributes to integration of afferent cardiovascular input.

"Inhibitory Mechanisms Regulating Brainstem Viscerosensory Integration"

Role on project: PI

Agency: Louisiana Board of Regents

Type: Research Competitiveness Subprogram, #LEQSF(2000-03)-RD-A-35

Total Funds: \$99,982

Dates: 07/00-06/04

Objective: To identify the mechanisms by which local inhibitory circuits integrate specific sympathetic nervous system afferents in the brainstem, identified by transynaptic "pre-labeling" of ocular projecting cells.

"Brainstem circuits involved in adrenal regulation"

Role on project: Postdoctoral Advisor (PI: Scott F. Davis)

Agency: National Institutes of Health, National Institute of Mental Health

Type: Postdoctoral NRSA F32MH064248

Total funds: \$128,724

Dates: 09/02-02/04

Objective: To identify and characterize brainstem circuitry involved in sympathetic regulation of the adrenal gland.

RECENT TEACHING EXPERIENCE

Systems Neuroscience (course instructor); 80 undergraduate, 10 graduate students (45 lecture hours)

Neuroanatomy Laboratory (course instructor); 65 undergraduate students (20 lecture hours)

Cellular Neurophysiology (course instructor); 8-12 graduate and undergraduate students (37.5 lecture hours)

Neuroscience Methods (team taught); 20 undergraduate and graduate students (3-5 lecture hours)

Synaptic Organization of the Brain (team taught); 20 graduate students (2.5 lecture hours)

Graduate Neuroscience (team taught); 10-12 graduate students (1 lecture hour)

Trends in Neuroscience (team taught journal club course); 15-20 graduate students

Medical Neuroscience (UK) (team taught) 116 medical students; (10 lecture hours)

PGY Experimental Design (team taught); ~10 graduate students (1 lecture hour)

UNIVERSITY/DEPARTMENT COMMITTEE SERVICE – TULANE UNIVERSITY

Undergraduate Neuroscience Major Faculty Committee	1999-2006
CMB Graduate Program Committee	2000-2002
CMB Masters Program Committee	2000-2001
Steering Committee, Neuroscience 4+1 Masters Program	2001-2006
CMB Faculty Search Committee	2002, 2004
Health Professions Committee	2002-2006
CMB Seminars Committee	2002-2006
CMB Space Committee	2005-2006
School of Science and Engineering Undergraduate Studies Committee	2006

UNIVERSITY/DEPARTMENT COMMITTEE SERVICE –UNIVERSITY OF KENTUCKY

College of Medicine Admissions Interview Panel	2007-present
Spinal Cord and Brain Injury Res Ctr External Review Comm.	2008
College of Medicine Admissions Committee	2008-present
Graduate Advisory Committee, Dept Physiology	2010-present
Research Title Review Committee, Dept Physiology	2010-present
Director of Graduate Studies, Dept Physiology	2010-present
Physiology Scholars Committee	2010-present

OTHER ACTIVITIES

Memberships

Society for Neuroscience 1989-
 Greater New Orleans Society for Neuroscience 1999-2006 (Secretary, 1999-2000)
 Newcomb Fellows, Tulane University 2003-2006
 Bluegrass Chapter of the Society for Neuroscience 2006-
 American Epilepsy Society 2007-
 - Member, Basic Science Committee 2009-2012

Editorial Review (ad hoc)

American Journal of Physiology	Brain Research
Endocrinology	Hypertension
Journal of Neurophysiology	Journal of Physiology (Lond)
Journal of Neuroscience	Journal of Virology
Neuroscience	Neuroendocrinology
Neuropharmacology	Pharmacology, Biochemistry and Behavior
Proc Nat'l Acad Sci	Expert Opinion on Therapeutic Targets
Biological Psychiatry	

Grant Review

National Science Foundation (ad hoc 2003, 2008-10)
 The Wellcome Trust (ad hoc 2006)
 National Institutes of Health, Clinical Neuroplasticity and Neurotransmitters (CNNT)
 study section (ad hoc 2005-2008);
 National Institutes of Health, ZRG1 IFCN-A Special Emphasis Panel: Anxiety, Feeding,
 and Gastric Function (2007);

National Institutes of Health, Neurobiology of Motivated Behavior (NMB)
study section (ad hoc 2009)
Citizens United for Research in Epilepsy (CURE) (ad hoc 2009)
National Institutes of Health, Neuroendocrinology, Neuroimmunology, and Behavior
(NNB) study section (Chartered member, 2009-2013)
National Institutes of Health, ZRG1 IFCN-C 85S Special Emphasis Panel: ARRA
Supplements (2010)

Symposia

1998 Symposium Participant: “Axon Sprouting in Cortical Pyramidal Cells: Implications for Epileptogenesis”, Spring Hippocampal Research Conference, Grand Cayman, BWI. Summarized by E. Buhl and G. Buzsaki, *Neuron* 21:27-35, 1998.

2000 Symposium Chair: “The Synaptic Physiology of Central Autonomic Regulation”, Annual Meeting of the Society for Neuroscience, New Orleans, LA.

2002 Keynote Speaker: “Synaptic Integration in the Nucleus Tractus Solitarius”, Club Vagus, Annual Meeting of the Society for Neuroscience, New Orleans, LA.

2006 Symposium Participant: “Cannabinoid modulation of dentate gyrus excitability in a murine model of temporal lobe epilepsy” UACOM Mini-Symposium University of Arizona, Dept. of Basic Medical Sciences, Phoenix, AZ.

2006 Symposium Participant: “Modulation of neural connections in the vagal complex by endocannabinoids: Implications for autonomic reflexes” 5th Annual Neuroethology Symposium, University of Maryland, College Park, MD.

Recent Selected Seminars

2001 Louisiana State University Medical Center, Dept of Cell Biology and Anatomy, “Epileptogenesis and synaptic reorganization in the temporal lobe”

2001 Tulane University School of Medicine, Dept. of Neurosurgery, “Epileptogenesis and synaptic reorganization in the temporal lobe”

2002 Tulane University School of Medicine, Dept of Physiology, “Synaptic regulation of gastric-related neurons in the dorsal vagal complex”

2002 Harvard University, Division of Neuroscience, McClean Hospital, “Differential modulation of brainstem vagal circuitry by hypocretin/orexin: Implications for autonomic coordination”

2003 University of Tennessee Health Science Center, Dept of Anatomy and Neurobiology, “Modulation of synaptic activity in the vagal complex: Implications for autonomic coordination”

2004 Tulane University, LAS Deans Steering Committee, “Neuroscience Research on Tulane’s Uptown campus”

2005 University of Utah, Dept of Physiology, "Modulation of synaptic activity in the vagal complex: Implications for autonomic reflexes"

2006 University of Texas Health Science Center-San Antonio, Dept of Physiology, "Modulation of synaptic activity in the vagal complex by cannabinoids: Implications for autonomic reflexes"

2006 Georgetown University School of Medicine, Dept of Pharmacology, "Modulation of synaptic activity in the vagal complex by cannabinoids: Implications for autonomic reflexes"

2007 Southern Illinois University (Springfield), Dept. of Pharmacology, "Modulation of synaptic activity in the vagal complex by cannabinoids: Implications for autonomic reflexes"

2007 Tulane University Dept. of Cell and Molecular Biology, "Cannabinoid modulation of dentate gyrus excitability in a murine model of temporal lobe epilepsy"

2008 The Swedish University of Agricultural Sciences & The National Veterinary Institute, Department of Virology, "Functional studies of neural circuitry identified using pseudorabies virus labels"

2009 University of Kentucky, Dept. of Molecular and Biomedical Pharmacology, "Modulation of Synaptic Activity in the Vagal Complex by Cannabinoids: Implications for Metabolic Regulation"

2009 Medical College of Georgia, Dept of Physiology, "Synaptic information processing in the vagal complex: Implications for metabolic regulation"

2009 Budapest University of Technology and Economics, EPIFSANS Program, "Information and decision structure of the human body: autonomic mechanisms of the human nervous system"

2009 University of Colorado Denver, Dept of Pediatrics; Dept of Pharmaceutical Sciences, "Synaptic network modification in models of post-traumatic epilepsy"

LABORATORY TRAINEES/PERSONNEL

Tulane Undergraduate Honors Thesis Research director for 10 students (2000-2006)
Undergraduate Research Project director for 18 students (2000-2006)
University of Kentucky undergraduate research advisor for 1 student (2007-2008)
Rotating PhD Student Project Advisor 11 Tulane students (2000-2006);
Rotating PhD Student Project Advisor 5 UK students (2007-2009)

Master's Thesis Advisor:

Weiye Xu, MS, Cell & Molecular Biology, Tulane University (2001)
Research topic: Electrophysiological effects of hypocretin in the vagal complex.

M. Deepak Bhaskaran, MS, Cell & Molecular Biology, Tulane University (2003)
Research topic: Gastric-related neuronal distribution in the dorsal vagal complex.

Christine T. Williams, MS, Neuroscience, Tulane University (2003)
Thesis title, "The divergence of the vagus nerve in the rat digestive system and the distribution of nicotinic acetylcholine receptor subunits in the dorsal motor nucleus of the vagus nerve"

Jennifer Rios-Pilier, Physiology, University of Kentucky College of Medicine (2009-2010)
Research Topic: Synaptic organization of autonomic circuits

Doctoral Thesis Advisor:

Nicholas R. Glatzer, Cell and Molecular Biology, Tulane University (2000-2005)
Ph.D. awarded June, 2005. Thesis title: "Opioid Modulation of Vagal Circuitry".

Kevin W. Williams, Neuroscience Program, Tulane University (2001-2006).
Ph.D. awarded August, 2006. Thesis title: "Rapid Inhibition of Neural Excitability in the Rat Dorsal Vagal Complex".

Hong Gao, Cell and Molecular Biology, Tulane University (2002-2008)
Ph.D. awarded April, 2008. Thesis title: "GABAergic Regulation of Neurons in the Dorsal Motor Nucleus of the Vagus: Morphological and Electrophysiological Properties"

M. Deepak Bhaskaran, Cell and Molecular Biology, Tulane University (2003-2008)
Ph.D. awarded April, 2008. Thesis title: "Cannabinoid and Vanilloid Modulation of Synaptic Activity in the Dentate Gyrus of a Mouse Model of Temporal Lobe Epilepsy"

Robert Hunt, Physiology, University of Kentucky College of Medicine (2006-2010)
Ph.D. awarded May, 2010 Thesis title: "Local Synaptic Network Interactions in the Dentate Gyrus of a Cortical Contusion Model of Posttraumatic Epilepsy"

Eva Bach, Physiology, University of Kentucky College of Medicine (2009-present)
Research Topic: Synaptic organization of autonomic circuits

Laura Haselhorst, Physiology, University of Kentucky College of Medicine (2009-present)
Research Topic: Synaptic reorganization and temporal lobe epilepsy

Visiting Scholar:

Liu Dan (2000-2006)

Postdoctoral Advisor:

Scott F. Davis, Ph.D. Cell and Molecular Biology, Tulane University (2001-2004)
Thomas C. Stuart, Ph.D. Cell and Molecular Biology and Neurobiotechnology Molecular Core Facility, Tulane University (2002-2005)
Michael Monroe, Ph.D. Cell and Molecular Biology, Tulane University (2004-2005)
Andrei V. Derbenev, Ph.D. Cell and Molecular Biology, Tulane University (2001-2006);
Physiology, University of Kentucky (2006-2009)
Andrea Zsombok, Ph.D., Physiology, University of Kentucky (2006-2009)
M. Deepak Bhaskaran, Ph.D., Physiology, University of Kentucky (2008-2009)
Shouwei Yang, M.D., Ph.D., Physiology, University of Kentucky (2009)
Peter Gyarmati, Ph.D., Physiology, University of Kentucky (2009-present)

Camille Blake, Ph.D., Physiology, University of Kentucky (2009-present)

Brent Hallahan, Ph.D., Physiology, University of Kentucky (2009-present)

Additional Ph.D. dissertation committees

Jennifer Brightwell, Neuroscience Program, Tulane University (P.Colombo, committee chair)

Renee Countryman, Neuroscience Program, Tulane University (P.Colombo, committee chair)

Renato Malcher-Lopez, Neuroscience Program, Tulane University (J. Tasker, committee chair)

Michael Monroe, Dept. of Pharmacology, LSUHSC (P.Hornby/E. Songu-Mize committee chairs)

Sen Wang, Dept. Cell & Molecular Biology, Tulane University (J. Tasker, committee chair)

Megan Bardgett, Dept. of Physiology, University of Kentucky (S. Stocker, committee chair)

Shaun Carlson, Dept. of Physiology, University of Kentucky (K. Saatman, committee chair)