CURRICULUM VITAE

1. Name, position, academic department

Robert L. Patrick
Associate Professor of Neuroscience
Department of Neuroscience

2. Education

Institution	Degree	Year	Field of Study
Temple University Philadelphia, PA	B.A.	1967	Chemistry
University of Maryland College Park, MD	---	1967	Biochemistry
Duke University Durham, NC	Ph.D.	1972	Biochemistry Dissertation: Regulation of Catecholamine Synthesis and Storage in the Adrenal Medulla

3. Professional Appointments

9/71 to 9/73: Postdoctoral Fellow, Department of Psychiatry, Stanford University, Stanford, CA

9/73 to 9/77: Research Associate, Department of Psychiatry, Stanford University, Stanford, CA.

9/77 to 9/82: Assistant Professor of Medical Science, Neurobiology Section, Division of Biology and Medicine, Brown University, Providence, RI.

9/82 to Present: Associate Professor of Neuroscience, Department of Neuroscience, Division of Biology and Medicine, Brown University, Providence, RI.

4. Completed Research

A. Chapters in Books

1. H. Akil, J. Madden IV, R.L. Patrick and J.D. Barchas. Stress-induced increase in endogenous opiate peptides: Concurrent analgesia and its partial reversal by naloxone. In: *Opiates and Endogenous Opioid Peptides.* H.W. Kosterlitz (Ed.), North Holland, Amsterdam, pp. 63-70, 1976.

2. R.L. Patrick. Regulation of biogenic amine synthesis and release in the central nervous system. In: *Neuroregulators and Psychiatric Disorders.* E. Usdin, D.A. Hamburg and J.D. Barchas (Eds.), Oxford University Press, New York, pp. 88-94, 1977.

3. R.L. Patrick. Synaptosomal regulation of dopamine synthesis. In: *Structure and Function of Monoamine Enzymes.* E. Usdin, N. Weiner and M.B.H. Youdim (Eds.), Marcel Dekker, New York, pp. 367-382, 1977.

4. J.D. Barchas, R.L. Patrick, J. Raese and P.A. Berger. Neuropharmacological aspects of affective disorders. In: *Depression: Biological and Psychological Perspectives.* E. Usdin (Ed.), Brunner-Mazel, New York, pp. 139-165, 1977.

5. R.D. Ciaranello and R.L. Patrick. Catecholamine neuroregulators. In: *Psychopharmacology from Theory to Practice.* J.D. Barchas, P.A. Berger, R.D. Ciaranello and G.R. Elliott (Eds.), Oxford University Press, New York, pp. 16-32, 1977.

6. R.L. Patrick. Amphetamine and cocaine: Biological mechanisms. In: *Psychopharmacolcogy from Theory to Practice.* J.D. Barchas, P.A. Berger, R.D. Ciaranello and G.R. Elliott (Eds.), Oxford University Press, New York, pp.331-340, 1977.

7. R.L. Patrick. Amphetamine-induced inhibition of synaptosomal dopamine synthesis activation. In: *Catecholamines: Basic and Clinical Frontiers.* E.Usdin, I.J. Kopin and J.D. Barchas (Eds.), Pergamon Press, New York, pp. 79-81, 1979.

8. R.L. Patrick. Stimulant drug effects on catecholamine synthesis regulation. In: *Function and Regulation of Monoamine Enzymes: Basic and Clinical Aspects.* E. Usdin, N. Weiner and M.B.H. Youdim (Eds.), Macmillan Publishers LTD, London, pp. 307-314, 1981.

9. J.M. Walker, S.L. Patrick, M.K. Hemstreet, A.G. Hohmann, W.J. Martin, R.R. Matsumoto, S.R. Goldstein, G.A. Prawdzik, F.O. Walker, R.P. Hammer Jr., .R. de Costa, W.D. Bowen and R.L. Patrick. Role of sigma receptors in nigrostriatal dopamine neurotransmission. In: *Multiple Sigma and PCP Receptor Ligands: Mechanisms for Neuromodulation and Neuroprotection?* J-M. Kamenka and E.F. Domino (Eds.), NPP Books, Ann Arbor, Michigan, pp. 577-597, 1992.

10. J.M. Walker, A.G. Hohmann, M.K. Hemstreet, W.J. Martin, M. Beierlein, J.S. Roth, S.L. Patrick, F.I. Carroll and R.L. Patrick. Functional role of sigma receptors in the nervous system. In: *Aspects of Synaptic Transmission, Volume II: Acetylcholine, Sigma Receptors, CCK and Eicosanoids, Neurotoxins.* T.W. Stone (Ed.), Taylor and Francis, London, pp. 91-112, 1993.

11. J.M. Walker, W.J. Martin, A.G. Hohmann, M.K. Hemstreet, J.S. Roth, M.L. Leitner, S.D. Weiser, S.L. Patrick, R.L. Patrick and R.R. Matsumoto. Role of sigma receptors in brain mechanisms of movement. In: *Sigma Receptors.* Y. Itzhak (Ed.), Academic Press, New York, pp. 205-224, 1994.

B. Refereed Journal Articles

1. R.L. Patrick and N. Kirshner. Effect of stimulation on the levels of tyrosine hydroxylase, dopamine-β-hydroxylase and catecholamines in intact and denervated rat adrenal glands. Mol. Pharmacol., 7:87-96, 1971.

2. R.L. Patrick and N. Kirshner. Acetylcholine-induced stimulation of catecholamine recovery in denervated rat adrenals after reserpine-induced depletion. Mol. Pharmacol., 7: 389-396, 1971.

3. R.L. Patrick and N. Kirshner. Developmental changes in rat adrenal tyrosine hydroxylase, dopamine-β-hydroxylase and catecholamine levels: Effect of denervation. Develop. Biol., 29:204-213, 1972.

4. R.L. Patrick and J.D. Barchas. Regulation of catecholamine synthesis in rat brain synaptosomes. J. Neurochem., 23:7-15, 1974.

5. R.L. Patrick and J.D. Barchas. Stimulation of synaptosomal dopamine synthesis by veratridine. Nature, 250:737-739, 1974.

6. R.L. Patrick, T.E. Snyder and J.D. Barchas. Regulation of dopamine synthesis in rat brain striatal synaptosomes. Mol. Pharmacol., 11:621-631, 1975.

7. J. Raese, R.L. Patrick and J.D. Barchas. Stimulation of rat striatal tyrosine hydroxylase by phospholipids and adenosine 3',5'-monophosphate. Arzneimittelforschung (Drug Research), 26:1107-1109, 1976.

8. R.L. Patrick and J.D. Barchas. Dopamine synthesis in rat brain striatal synaptosomes. I.
Correlations between veratridine-induced synthesis stimulation and endogenous dopamine release. J. Pharmacol. Exp. Ther., 197:89-96, 1976.

9. R.L. Patrick and J.D. Barchas. Dopamine synthesis in rat brain striatal synaptosomes. II. Dibutyryl cyclic AMP and 6-methyltetrahydropterine-induced synthesis increases without an increase in endogenous dopamine release. J. Pharmacol. Exp. Ther., 197: 97-104, 1976.

10. J. Raese, R.L. Patrick and J.D. Barchas. Phospholipid-induced activation of tyrosine hydroxylase from rat brain striatal synaptosomes. Biochem. Pharmacol., 25:2245-2250, 1976.

11. R.L. Patrick and J.D. Barchas. Potentiation by cocaine of the stimulus-induced increase in dopamine synthesis in rat brain striatal synaptosomes. Neuropharmacol., 16: 327-332, 1977.

12. J. Madden IV, H. Akil, R.L. Patrick and J.D. Barchas. Stress-induced parallel changes
in central opioid levels and pain responsiveness in the rat. Nature, 265:358-360, 1977.

13. D.W. Andrews, R.L. Patrick and J.D. Barchas. The effects of 5-hydroxytryptophan and 5-hydroxytryptamine on dopamine synthesis and release in rat brain striatal synaptosomes. J. Neurochem., 30:465-470, 1978.

14. M.M. Roberts and R.L. Patrick. Amphetamine- and phenylethylamine-induced alterations in dopamine synthesis regulation in rat brain striatal synaptosomes. J. Pharmacol. Exp. Ther., 209: 104-110, 1979.

15. R.L. Patrick and M.T. Rendel. pH-Induced alterations in dopamine synthesis regulation in rat brain striatal synaptosomes. J. Neurochem., 34:1506-1513, 1980.

16. C.C. Ouimet, R.L. Patrick and F.F. Ebner. An ultrastructural and biochemical analysis of norepinephrine-containing varicosities in the cerebral cortex of the turtle *Pseudemys.* J. Comp. Neurol., 195:289-304, 1981.

17. R.L. Patrick. Phenylethylamine effects on dopamine synthesis: Structure-activity relationships. Biochem. Pharmacol., 30:141-146, 1981.

18. D.A. Haycock and R.L. Patrick. Catecholamine synthesis regulation in hypothalamic synaptosomes. Brain Res., 214:371-385, 1981.

19. R.L. Patrick, A.L. Berkowitz and A.C. Regenstein. Effects of *in vivo* amphetamine administration on dopamine synthesis in rat brain striatal synaptosomes. J. Pharmacol. Exp. Ther., 217:686-691, 1981.

20. D.A. Haycock, S.E. Greenblatt, H.L. Askins and R.L. Patrick. Differential effects of calcium on catecholamine synthesis regulation in olfactory tubercle and hypothalamic synaptosomes. Brain Res., 299:15-23, 1984.

21. D.A. Haycock and R.L. Patrick. Dihydroxyphenylalanine production in rat brain striatal synaptosomes: Stimulation by a calcium chelator. J. Neurochem., 42:911-917, 1984.

22. C.C. Ouimet, R.L. Patrick and F.F. Ebner. The projection of three extrathalamic cell groups to the cerebral cortex of the turtle *Pseudemys.* J. Comp. Neurol., 237:77-84, 1985.

23. N. Tuross and R.L. Patrick. Effects of propranolol on catecholamine synthesis and uptake in the central nervous system of the rat. J. Pharmacol. Exp. Ther., 237:739-745, 1986.

24. R.R. Matsumoto, A.M. Lohof, R.L. Patrick and J.M. Walker. Dopamine-independent motor behavior following microinjection of rimorphin in the substantia nigra. Brain Res., 444:67-74, 1988.

25. R.R. Matsumoto, K.H. Brinsfield, R.L. Patrick and J.M. Walker. Rotational behavior mediated by dopaminergic and non-dopaminergic mechanisms following intranigral injection of specific mu, delta and kappa opioid agonists. J. Pharmacol. Exp. Ther., 246:196-203, 1988.

26. K.A. Colby, T.L. Thompson and R.L. Patrick. Tyrosine hydroxylase phosphorylation in rat brain striatal synaptosomes. Brain Res., 478:103-111, 1989.

27. S.R. Goldstein, R.R. Matsumoto, T.L. Thompson, R.L. Patrick, W.D. Bowen and J.M. Walker. Motor effects of two sigma ligands mediated by nigrostriatal dopamine neurons. Synapse, 4:254-258, 1989.

28. M.E.N. Davis and R.L. Patrick. Diacylglycerol-induced stimulation of neurotransmitter release from rat brain striatal synaptosomes. J. Neurochem., 54:662-668, 1990.

29. T.L. Thompson, K.A. Colby and R.L. Patrick. Activation of striatal tyrosine hydroxylase by in vivo electrical stimulation: Comparison with cyclic AMP-mediated activation. Neurochem. Res., 15:1159-1166, 1990.

30. S.L. Patrick, T.L. Thompson, J.M. Walker and R.L. Patrick. Concomitant sensitization of amphetamine-induced behavioral stimulation and *in vivo* dopamine release from rat caudate nucleus. Brain Res., 538:343-346, 1991.

31. S.L. Patrick, J.M. Walker, J.M. Perkel, M. Lockwood and R.L. Patrick. Increases in rat striatal extracellular dopamine and vacuous chewing produced by two sigma receptor ligands. Eur. J. Pharmacol., 231:243-249, 1993.

32. S.D. Weiser, S.L. Patrick, S.W. Mascarella, J. Downing-Park, X. Bai, F.I. Carroll, J.M. Walker and R.L. Patrick. Stimulation of rat striatal tyrosine hydroxylase activity following intranigral administration of sigma receptor ligands. Eur. J. Pharmacol., 275:1-7, 1995.

33. M.C. Sanudo-Pena, S.L. Patrick, R.L. Patrick and J.M. Walker. Effects of intranigral cannabinoids on rotational behavior in rats: interactions with the dopaminergic system. Neurosci. Lett., 206:21-24, 1996.

34. M.C. Sanudo-Pena, S.L. Patrick, S. Khen, R.L. Patrick, K. Tsou and J.M. Walker. Cannabinoid effects in basal ganglia in a rat model of Parkinson's disease. Neurosci. Lett., 248: 171-174, 1998.

C. Non-referreed Journal Articles

1. R.L. Patrick. Synaptic clefts are made to be crossed: Neurotransmitter signaling in the central nervous system. Toxicologic Pathology, 28: 31-36, 2000.

D. Abstracts

1. R.L. Patrick and N. Kirshner. Secretion-induced synthesis of protein and repletion of adrenaline in rat adrenal medulla. Fed. Proc., 29:277, 1970.

2. R.L. Patrick and N. Kirshner. Effect of denervation on rat adrenal medullary tissue. Fed. Proc., 30:333, 1971.

3. R.L. Patrick and J.D. Barchas. Regulation of catecholamine synthesis in rat brain synaptosomes. Soc. Neurosci. Abstr., 209, 1973.

4. R.L. Patrick and J.D. Barchas. Effects of veratridine and dibutyryl cyclic AMP on dopamine synthesis and release in rat brain striatal synaptosomes. Sixth Int. Cong. Pharmacol. Abstr., 586, 1975.

5. T.E. Snyder, R.L. Patrick and J.D. Barchas. Comparison of the mechanisms of dopamine and apomorphine-induced inhibition of dopamine synthesis in rat brain striatal synaptosomes. Sixth Int. Cong. Pharmacol. Abstr., 91, 1975.

6. R.L. Patrick and J.D. Barchas. Endogenous dopamine release-dependent and independent activation of dopamine synthesis in rat brain striatal synaptosomes. Fed. Proc., 35: 406, 1976.

7. J. Raese, R.L. Patrick and J.D. Barchas. Phospholipid-induced activation of tyrosine hydroxylase from rat brain striatal synaptosomes. Fed. Proc., 35:485, 1976.

8. R.L. Patrick and J.D. Barchas. Cocaine-induced enhancement of synaptosomal dopamine synthesis activation. Trans. Amer. Soc. Neurochem., 8:163, 1977.

9. R.L. Patrick and M.T. Rendel. Rat brain striatal synaptosomes become relatively unresponsive at “optimal” pH conditions for measuring dopamine formation. Soc. Neurosci. Abstr., Vol. 5, p. 567, 1979.

10. D.A. Haycock and R.L. Patrick. Catecholamine synthesis regulation in hypothalamic synaptosomes. Ninth Annual Meeting of the New England Pharmacologists, Abstr., p. 21,
1980.

11. A. Berkowitz, A. Regenstein and R.L. Patrick. Synaptosomal dopamine synthesis: Effects of *in vitro* and *in vivo* amphetamine administration. Thirty-eighth Eastern New England Biology Conference, Abstr., p. 2, 1980.

12. D.A. Haycock and R.L. Patrick. Hypothalamic synaptosomes: A model system for studying regulation of norepinephrine formation. Eighth International Congress of Pharmacology, Abstr., p. 320, 1981.

13..N. Tuross, V. Narurkar and R.L. Patrick. Catecholamine regulation in the sympathetic nervous system of the spontaneously hypertensive rat. Soc. Neurosci. Abstr., Vol. 8, p. 430, 1982.

14. D.A. Haycock and R.L. Patrick. EGTA-induced activation of synaptosomal tyrosine hydroxylase: Demonstration of increased dopa synthesis using high performance liquid chromatography. Soc. Neurosci. Abstr., Vol. 8, p. 885, 1982.

15. N. Tuross and R.L. Patrick. Effect of propranolol on norepinephrine uptake in rat brain hypothalamic synaptosomes. The Pharmacologist, 25, No. 3, p. 197, 1983.

16. D.A. Haycock, S.E. Greenblatt, H.L. Askins and R.L. Patrick. Olfactory tubercle and hypothalamic catecholamine synthesis regulation: Differential effects of amphetamine and calcium chelation. Soc. Neurosci. Abstr., Vol. 9, Part 2, p. 992, 1983.

17. A.L. Weiner and R.L. Patrick. Catecholamine synthesis regulation in different rat brain regions. Thirty-eighth Eastern Colleges Science Conference, Abstr., 1984.

18. K.A. Colby and R.L. Patrick. Multi-system activation of tyrosine hydroxylase in rat brain synaptosomes. Trans. Amer. Soc. Neurochem., 16:236, 1985.

19. B.S. Brann, W.J. Cashore, R.L. Patrick and W. Oh. *In vitro* effects of bilirubin on dopamine synthesis in adult rat brain synaptosomes. Pediatr. Res., 19:335A, 1985.

20. M.M. Mahtani, D.A. Haycock and R.L. Patrick. Interactions between amphetamine and *in vivo* electrical stimulation suggest that two components are involved in depolarization-induced dopamine synthesis stimulation. Soc. Neurosci. Abstr., Vol. 12, Part 1, p. 602, 1986.

21. A.M. Lohof, R.R. Matsumoto, R.L. Patrick and J.M. Walker. Motor effects of rimorphin in the rat substantia nigra. Soc. Neurosci. Abstr., Vol. 12, Part 2, 1225, 1986.

22. T.L. Thompson, K.A. Colby and R.L. Patrick. Synaptosomal tyrosine hydroxylase phosphorylation. Seventeenth Annual Meeting of the New England Pharmacologists, Abstr., p. 8, 1988.

23. J.M. Walker, S.R. Goldstein, R.L. Patrick and R.R. Matsumoto. Dopamine-mediated circling behavior produced by sigma ligands. Soc. Neurosci. Abstr., Vol. 14, Part 1, p. 157, 1988.

24. R.R. Matsumoto, S.R. Goldstein, T.L. Thompson, R.L. Patrick and J.M. Walker. Circling produced by sigma ligands via a dopaminergic mechanism. Presented at the Committee on Drug Dependence Annual Meeting, North Falmouth, MA, July 1988.

25. M.E.N. Davis and R.L. Patrick. Dopamine and 5-HT release from striatal synaptosomes: Stimulation by diacylglycerol. Nineteenth Annual Meeting of the New England Pharmacologists, Abstr. #7, 1990.

26. J.M. Walker, S.L. Patrick and R.L. Patrick. Increased dopamine release *in vivo* and oral-facial movements following intraperitoneal administration of two sigma ligands. Soc. Neurosci. Abstr., Vol. 17, Part 1, p. 361, 1991.

27. S.D. Weiser, S.L. Patrick, S.W. Mascarella, X. Bai, F.I. Carroll, J.M. Walker and R.L. Patrick. Effects of sigma ligands on striatal dopamine synthesis and rotational behavior in rats. Soc. Neurosci. Abstr., Vol. 19, Part 2, p. 1552, 1993.

28. M.C. Sanudo-Pena, S.L. Patrick, R.L. Patrick and J.M. Walker. Effect of intranigral administration of cannabinoids upon rotational behavior: Interaction with the dopaminergic system. Soc. Neurosci. Abstr., Vol. 21, Part 3, p. 1906, 1995.

29. K. Tsou, S.L. Patrick, R.L. Patrick and J.M. Walker. Decreased cannabinoid stimulated guanylyl-5'-(3[^{35}S])triphosphate binding in the rat cerebellum in response to chronic Δ9-tetrahydrocannabinol treatment. International Cannabinoid Research Society Abstr., p. 27, 1996.

30. M. C. Sanudo-Pena, S. Patrick, R. Patrick and J.M. Walker. Cannabinoid control of movement in the basal ganglia in an animal model of Parkinson's disease. International Cannabinoid Research Society Abstr., p. 77, 1997.

31. M. C. Sanudo-Pena, S. Patrick, R. Patrick and J.M. Walker. Cannabinoid control of movement in the basal ganglia in an animal model of Parkinson's disease. Soc. Neurosci. Abstr., Vol. 23, Part 1, p. 468, 1997.

E. Invited Lectures (Partial List)

1. University of Maine, Orono Maine. Topic: Regulation of Catecholamine Synthesis in the Central Nervous System. 4/17/80

2. Women and Infant's Hospital, Dept. Pediatrics Research Fellow Seminar Series given at RI Hospital. "Synaptosomes as a Model System for Studying Catecholamine Synthesis Regulation." 9/30/83.

3. RI Hospital, Dept. Surgery. "Synaptosomal Regulation of Catecholamine Formation." 10/7/83.

4. University of Rhode Island, Dept. Pharmacology. "Cyclic Nucleotides and Neuronal Functioning." 10/31/83.

5. Rhode Island Chapter of the American Heart Association. Topic: "Propranolol Mechanisms in the Central Nervous System." 3/26/85

6. State University of New York at Buffalo, Dept. Pharmacology. "Regulation of Catecholamine Synthesis in the Central Nervous System." 9/29/86.

7. University of Southern Colorado, Psychology Department, Pueblo, Colorado. Minority Biomedical Research Support Program. "The Effects of Stimulant Drugs on Brain Neurochemistry." 3/9/92.

8. University of Massachusetts at Dartmouth, Dept. Biology. Seminar Topic: Stimulant Drug Effects on Brain Biochemistry and Behavior." 1994.

9. Butler Hospital, Neuroscience and Psychiatry Research Seminar Series. "Neurochemistry of Amphetamine and Cannabis Use." 10/11/94.

10. Invited Symposium Speaker: Toxicologic Pathology of the Nervous System. Society of Toxicologic Pathologists International Symposium, Washington, D.C., June 13-17, 1999. Title of presentation: "Synaptic clefts are made to be crossed: Neurotransmitter signaling in the central nervous system." 6/99.

11. Invited Speaker: Sention, Inc., Providence, RI. Topic: "Catecholamines and Behavior." 12/20/01.

F. Research in progress.

I am interested in studying the effects of chronic psychoactive drug treatment on brain neurotransmitter functioning for two reasons: (1) chronic psychoactive drug treatment with agents such as phencyclidine and amphetamine can produce schizophrenic-like symptoms in human subjects. Animal paradigms employing these agents may therefore have the potential to serve as animal models for psychiatric disorders. (2) Chronic exposure to many psychoactive drugs, such as amphetamine, cocaine and morphine, leads to alterations in the brain's subsequent response to these drugs. For some behaviors, there is an increase in sensitivity ("behavioral sensitization"). I am interested in exploring the neurochemical bases for these alterations in behavioral sensitivity. This issue could have importance with regard to drug abuse, in that altered brain neurochemistry may be responsible for "drug craving" that addicted individuals may experience even long after they have stopped using the drugs. I use *in vitro* preparations such as rat synaptosomes (nerve-endings) to study drug-induced alterations in neurotransmitter release, and also study this process *in vivo* using microdialysis. Transmitter systems of interest include catecholamines and amino acid transmitters.

5. Research Grants Funded: Amounts Represent Direct Costs

A. Completed Grants

.**1978-81** National Institute of Mental Health (NIMH). Catecholamine Regulation and Psychoactive Drugs: $120,000. PI: Robert L. Patrick.

1980 Brown University Biomedical Research Support Grant (BRSG): $5,370. PI: Robert L. Patrick.

1981-82 American Heart Association, Rhode Island Affiliate. Stress, Catecholamines and Hypertension: $8,000. PI: Robert L. Patrick.

1982 Rhode Island Foundation. Stress, Catecholamines and Hypertension: $4,000. PI: Robert L. Patrick.

1982 Brown University BRSG: $35,654. PI: Robert L. Patrick.

1982-84 NIMH. Catecholamine Regulation and Psychoactive Drugs: $100,000. PI: Robert L. Patrick.

1983 Rhode Island Foundation. Propranolol, Catecholamines and Hypertension: $3,500. PI: Robert L. Patrick.

1983-84 American Heart Association, Rhode Island Affiliate. Propranolol, Catecholamines and Hypertension: $12,190. PI: Robert L. Patrick.

1984-86 Scottish Rite Schizophrenia Research Program. Isolation and Characterization of Dopaminergic Nerve Endings: $29,583. PI: Robert L. Patrick.

1984-87 American Heart Association. Propranolol Mechanisms in the Central Nervous System: $82,000. PI: Robert L. Patrick.

1986-92 NIMH. Catecholamine Regulation and Psychoactive Drugs: $228,665. PI: Robert L. Patrick.

1988 Burroughs Wellcome Fund. Travel Grant: $2,950. PI: Robert L. Patrick.

1989-90 ADAMHA Small Instrumentation Grant Program: $8,195. PI: Robert L. Patrick.

1992-95 NIMH. Sigma Receptors and Dopamine Neurotransmission: $336,803. PI: J. Michael Walker, Psychology Department, Brown University; Co-Investigator: Robert L. Patrick.

1996-99 National Institute on Drug Abuse (NIDA). Sigma Receptors and Dopamine Neurotransmission: $380,789. PI: J. Michael Walker, Psychology Department, Brown University; Co-Investigator: Robert L. Patrick.

1997-00 National Institute on Drug Abuse (NIDA). Investigations of Precipitated Cannabinoid Withdrawal. $390,705. PI: J. Michael Walker, Psychology Department, Brown University; Co-Investigator: Robert L. Patrick.

6. Service

A. To The University

Undergraduate Freshman Advisor: 1979-1981.
Secretary: University Awards and Benefits Committee, 1982.
BRSG review committee to evaluate University biomedical grant applications, 1981-82.
Summer Research Assistantship Committee, 1982.
Neurology Search Committee, 1982.
Academic Advisor: Sc.B. Biology Concentrators, 1982-1999
University Radiation Safety Committee, 1987.
Neuroscience Undergraduate Curriculum Committee, 1987.
Graduate Program Committee in Neurobiology and Physiology, 1987.
Faculty Promotions Committee, Center for Neuroscience, 1987.
Chair, Neurobiology Section, 1991-92.

Member, Executive Committee, Division of Biology and Medicine, 1991-92.
Department of Neuroscience Search Committee, 1992-93.
The Faculty Representative to the Campus Police and Security Committee, 1992-94.
Co-organizer, Neuropharmacology and Second Messenger Journal Club, 1993-94.
Graduate Thesis Committees: Neuroscience, Psychology, Pharmacology, Biochemistry, and Master of Medical Science, From 1980s-Present
Academic Advisor: Neuroscience Concentrators, 1982-Present
Medical School Curriculum Committee, 1997-2004.
Medical School Preclinical Basic Science Subcommittee, 1998-2004.
Medical School Subcommittee on Preclinical Course Reviews, 1998-2004.
Co-Director, Neuroscience Department Graduate Student Professional Development Workshops on Giving Oral Presentations to a Group, 1998-2003.
Neuroscience Department Graduate Student Comprehensive Examination Committee, 1999-Present.
Chair, Medical School Assessment Committee, Ability III: Using Basic Science to Guide the Practice of Medicine, 1999-2004.
Academic Advisor: Human Biology: Brain and Behavior Concentrators, 1999-Present
Department Safety Committee, 2001-Present.
Freshman Advisor, 2001.
Sophomore Advisor, 2002-Present.

B. To The Profession

Member, National Institutes of Health (NIH) Site Visit Team to the University of Colorado for review of a Program Project Grant Proposal, 6/1/82.

Grant Reviewer: Veterans Administration Central Office, Dept. of Medicine and Surgery, Washington, D.C. Career Development Program, 1982

Grant Reviewer: NSF: Neurobiology Program, 1983. Molecular and Cellular Neurobiology Program; Integrative Neural Systems Program, 1987.

Member, American Heart Association, Rhode Island Affiliate, Research Committee, 1985-87.

Grant Reviewer: Veterans Affairs Medical Center, Livermore, CA, 1994.

External Tenure Decision Reviewer: Dept. of Psychology, Indiana University, South Bend, IN, 1994; Dept. of Basic Medical Sciences, Mercer University School of Medicine, 2001; Dept. of Biology, University of Massachusetts, 2005.

Journal Reviewer: Molecular Pharmacology, Journal of Neurochemistry, Brain Research, Biochemical Pharmacology, Science, Journal of Experimental Zoology, Pharmacology Biochemistry and Behavior, Journal of Neuroscience Methods, Life Sciences: 1980 to Present.

C. To The Community

1. Providence Urban League sponsored “Big Brother” Mentoring Program for Providence school students “at risk” for dropping out of school: 3 years participation from 1995 through 1998.

2. Liaison for Brown University participation in Brain Awareness Week, a Society for Neuroscience-sponsored program to send speakers to area schools, grades K-12 to talk to the students about Neuroscience, 1998-2000.

7. Honors

A. Academic Honors

1. Graduation cum laude in Chemistry from Temple University, 1967.
2. American Institute of Chemists Graduating Senior Award, Temple University,1967.

B. Fellowships

1. Predoctoral Fellowship (Public Health Service), Duke University, 1967-71.
2. Postdoctoral Fellowship (Public Health Service), Stanford University, 1971-73.
3. Alfred P. Sloan Foundation Fellowship for Basic Research in Neurosciences, 1977-81.

C. Professional Societies

1. Society for Neuroscience
2. American Association for the Advancement of Science

D. Additional Honors

1. Recipient: Burroughs Wellcome Research Travel Award: 1988.

8. Teaching

A. 2003

Course #, name, semester	**Role**	**Enrollment**	**Total # Sessions**	**Total # Taught By Faculty Member**
BN 216: Neurochemistry and Behavior. Spring: 2003	Organizer and Administrator	13	14	All
BIO 274: Organ System Pharmacology. Spring: 2003	Organizer and Administrator	67	22	8
BN 0005: Neuroscience. Pre-college course. Summer: 2003	Organizer and Administrator	21	23	All
BN 0009: Biochemistry of the Nervous System. Pre-college course. Summer: 2003	Organizer and Administrator	13	23	All
BN 167: Neuropharmacology and Synaptic Transmission. Fall: 2003	Organizer and Administrator	48	Lecture: 2x/wk Lab/Recit.: 2x/wk	All All
Bio 273: Organ System Pharmacology. Fall: 2003	Organizer and Administrator	60	22	10

B. 2004

Course #, name, semester	**Role**	**Enrollment**	**Total # Sessions**	**Total # Taught By Faculty Member**
Bio 274: Organ System Pharmacology. Spring 2004	Course Leader	58	25	1
BN 167: Neuro-Pharmacology and Synaptic Transmission. Fall 2004	Course Leader	43	25	25
Bio 350: Integrated Pathophysiology/ Pharmacology. Fall 2004	Course Leader	69	21	2

C. 2005

Course #, name, semester	**Role**	**Enrollment**	**Total # Sessions**	**Total # Taught By Faculty Member**
Bio 351: Integrated Pathophysiology/ Pharmacology. Spring 2005	Co-Course Organizer with Dr. Wayne Bowen	70	25	0
BN 216: Neurochemistry and Behavior Seminar Course. Spring 2005	Sole Instructor	20	12 x 2.5 hr	Leader for all
BN 0001: The Brain: An Introduction To Neuroscience. Summer 2005	Sole Instructor	45 (50% pre-college and 50% undergraduates)	4/Wk: 23 total	All 23
Bio 350: Integrated Pathophysiology/ Pharmacology. Fall 2005	Co-Course Organizer with Dr. Wayne Bowen	70	25	2

D. 2006 (Current Spring Courses)

Course #, name, semester	**Role**	**Enrollment**	**Total # Sessions**	**Total # Taught By Faculty Member**
Bio 351: Integrated Pathophysiology/ Pharmacology. Spring 2006	Co-Course Organizer with Dr. Wayne Bowen	70	25	0
BN 167: Neuro-Pharmacology and Synaptic Transmission. Course Being Taught At the Pfizer Drug Company. Spring 2006	Course Leader	25	14 x 3 hr	14

D. Independent Studies and Theses (Past 3 Years, Unless Otherwise Noted)

1. Advising: Neuroscience Undergraduate Concentration: 11 (Past Year)
2. Advising: Human Biology: Brain & Behavior Concentration: 26 (Past Year)
3. Second Reader: Undergraduate Honors Theses: 4
4. Graduate Student Ph.D. Thesis Committee: 1

9. Date of Preparation of this Document: March 27th, 2006

A curriculum vitae (CV) written for academia should highlight research and teaching experience, publications, grants and fellowships, professional associations and licenses, awards, and any other details in your experience that show youâ€™re the best candidate for a faculty or research position advertised by a college or university.Â SERVICE Include any service you have done for your department, such as serving as an advisor to students, acting as chair of a department, or providing any other administrative assistance.Â This is an example of an academic curriculum vitae. Download the academic CV template (compatible with Google Docs and Word Online) or see below for more examples. Â©TheBalance 2018. Download the Word Template. A CV (short for the Latin phrase curriculum vitae, which means â€œcourse of lifeâ€) is a detailed document highlighting your professional and academic history. CVs typically include information like work experience, achievements and awards, scholarships or grants youâ€™ve earned, coursework, research projects and publications of your work. You may be asked to submit a CV when applying for jobs in academia or a job outside the US. If you need help determining how to write a CV, it can be helpful to consult a template. Here is additional background on the document along with an easy-to-follow CV exam What is a Curriculum Vitae (CV)? A CV is a complete profile of your academic achievements, publications, scholarly interests, and skills developed as a result of academic degrees and related experience. It is often requested from undergraduate students applying to research positions, graduate/professional programs, and scholarship.Â Personal Information. This includes name, home address, office address (if applicable), email address, and phone number, which should be up-to-date. It can be helpful to include your citizenship if it makes you eligible to work in the country of the institution you are applying to.Â Most departments recommend separating published conference proceedings from publications that appear in books or journals.