Curriculum Vitae
Ted M. Dawson, M.D., Ph.D.
Leonard and Madlyn Abramson Professor in Neurodegenerative Diseases

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Current Appointments:

Leonard and Madlyn Abramson Professor in Neurodegenerative Diseases

Scientific Director, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD

Co-Director, Neuroregeneration Program, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD

Professor, Departments of Neurology and Neuroscience, Graduate Program in Cellular and Molecular Medicine and Interdisciplinary Graduate Training Program in Nanotechnology for Biology and Medicine The Johns Hopkins University School of Medicine, Baltimore, MD

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Education and Training:

1977-81	B.S. – Montana State University, Bozeman, MT; Major: Premedicine (with Highest Honors)
1981-86	M.D. – University of Utah School of Medicine, Salt Lake City, UT; Discipline: Medicine
1981-86	Ph.D. – University of Utah School of Medicine, Salt Lake City, UT; Discipline: Pharmacology
1986-87	Medicine Internship – University of Utah Affiliated Hospitals, Salt Lake City, UT
1987-90	Neurology Residency – Hospital of the University of Pennsylvania, Philadelphia, PA
1990-92	Postdoctoral Fellowship, Neuroscience, The Johns Hopkins University School of Medicine, Baltimore, MD; Sponsor: Dr. Solomon H. Snyder

1991-92 Movement Disorders Clinical Fellowship, The Johns Hopkins University School of Medicine, Baltimore, MD

Professional Experience / Appointments:

1984-86 Teaching/Research Assistant, Department of Pharmacology, University of Utah School of Medicine, Salt Lake City, UT

1989 Assistant Instructor, Department of Neurology, Hospital of the University of Pennsylvania, Philadelphia, PA

1989-1990 Instructor, Department of Neurology, Hospital of the University of Pennsylvania, Philadelphia, PA

1991-1992 Senior Clinical Fellow, Department of Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

1992-1993 Instructor, Departments of Neuroscience and Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

1993-1994 Assistant Professor, Department of Neuroscience, The Johns Hopkins University School of Medicine, Baltimore, MD

1994-1996 Assistant Professor, Departments of Neurology and Neuroscience and Graduate Program in Cellular and Molecular Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD

1996-2000 Associate Professor, Departments of Neurology and Neuroscience and Graduate Program in Cellular and Molecular Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD

1996-2002 Co-Director, Parkinson's Disease Center, Department of Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

1998- Director, Morris K. Udall Parkinson's Disease Research Center of Excellence, Department of Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

2000- Professor, Departments of Neurology and Neuroscience and Graduate Program in Cellular and Molecular Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD

2002- Director, Neuroregeneration and Repair Program, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD

2002- Director, Parkinson's Disease and Movement Disorder Center, Department of Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

2004- Leonard and Madlyn Abramson Professor in Neurodegenerative Diseases, Department of Neurology, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD

2007-2010 Director, Movement Disorder Division, Department of Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD

2007-	Professor, NBMed – Interdisciplinary Graduate Training Program in Nanotechnology for Biology and Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD
2008-2010	Director, Stem Cell Program, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD
2010-	Scientific Director, Institute for Cell Engineering, The Johns Hopkins University School of Medicine, Baltimore, MD

Clinical Activities:

1993-	Neurology Attending on the inpatient and consultation service, The Johns Hopkins Hospital, Baltimore, MD
1993-	Outpatient Neurology Attending, specializing in Movement Disorders, 1/2 day of clinic per week, The Johns Hopkins Hospital, Baltimore, MD

Board Certifications and Licensure:

American Board of Psychiatry and Neurology #34959

National Board of Medical Examiners #308340

Medical License, State of Maryland #40127

Awards, Fellowships, Honors:

1980	Phi Kappa Phi – Montana State University
1980-81	Student Orientation Leader Traineeship – Montana State University
1981	Charter President, Alpha Epsilon Delta – Montana State University
1978-81	Advanced Honor Scholarship – Montana State University
1982	Summer Research Fellowship – University of Utah
1982	Summer Preceptorship – University of Wyoming, College of Human Medicine
1984	Medical Student Research Fellowship – Epilepsy Foundation
1984-85	Neuroscience Program Tuition Waiver – University of Utah
1984-85	Medical Student Research Fellowship – Pharmaceutical Manufacturing Association
1985	Summer Research Fellowship – University of Utah
1985	Dr. James A. Bush Memorial Research Award – University of Utah School of Medicine
1985	Hoffmann-LaRoche Graduate Student Travel Award, ASPET
1985	National Institute of Health, Medical Student Elective in Medical-Surgical Neurology
1985	Neuroscience Subspecialty Award – American Federation for Clinical Research
1986	Upjohn Achievement Award, Outstanding Research Contribution for the Graduating Class – University of Utah School of Medicine
1986	The Merck Manual Award – University of Utah School of Medicine
1990	Winter Conference on Brain Research Fellowship Award
1990-92	Pfizer Postdoctoral Fellowship Award

1990-92	Dana Foundation Postdoctoral Fellowship Award
1990-92	The French Foundation for Alzheimer Research Postdoctoral Fellowship Award
1990-93	American Academy of Neurology Research Fellowship Award
1992-97	Clinical Investigator Development Award, National Institute of Neurological Disorders and Stroke, NS-01578
1995	Ruth Salta Junior Investigator Achievement Award, for Outstanding Contribution in Alzheimer's Disease Research
1995	The American Academy of Neurology Decade of the Brain, Plenary Session Presentation and Lecture
1995-98	The Paul Beeson Physician Faculty Scholars in Aging Research Program
1996	Elected to the American Neurological Association
1996	Derek Denny-Brown Young Neurological Scholar Award, American Neurological Association
1994-97	International Life Sciences Institute Award
1997-01	Established Investigator-American Heart Association
1997	The Ralph Rossen Memorial Lecture
1998	The Paul Stark Lecture, Department of Pharmacology, University of Rochester
1999	The Klayman Memorial Lecture, Department of Neurology, Washington University at Saint Louis
2000	ISI Highly Cited Researcher Award
2001	Santiago Grisoliá Chair and Medal
2001-03	NARSAD Independent Investigator Award
2004-	Leonard and Madlyn Abramson Professor in Neurodegenerative Diseases
2004-06	America's Top Physicians Award – Neurology, Consumers Research Council of America
2006-	Faculty of 1000 Biology – Neurobiology of Disease and Regeneration Section of the Neuroscience Faculty
2006	"Celebration of Hope" – Distinguished Clinician Award Huntington's Disease Society of America — 2006.
2006	Gabriele Zu Rhein Lectureship in Neuropathology, University of Wisconsin at Madison
2008	Distinguished Lecturer in Neuroscience and Aging, NIH/NIA
2008	Elected to the Association of American Physicians
2008	Elected Fellow, American Association for the Advancement of Science
2009	Druker Memorial Lecture, Beth Israel Deaconess Medical Center, Harvard University

Publications:

1. **Dawson, T.M.** and J.K. Wamsley. "Autoradiographic Localization of [^{3}H]-Imipramine Binding Sites: Association with Serotonergic Neurons." Brain Res. Bull., 11:325-334 (1983).
2. Gehlert, D.R., **T.M. Dawson**, H.I. Yamamura and J.K. Wamsley. "Localization of [^{3}H]-Forskolin Binding Sites in the Rat Brain Using Quantitative Autoradiography." Eur. J. Pharmacol., 106:223-225 (1984).
3. **Dawson, T.M.**, D.R. Gehlert, E.W. Snowhill and J.K. Wamsley. "Quantitative Autoradiographic Evidence for Axonal Transport of Imipramine Receptors in the CNS." Neurosci. Lett., 55:261-266 (1985).
4. **Dawson, T.M.**, D.R. Gehlert, H.I. Yamamura, A. Barnett and J.K. Wamsley. "D-1 Dopamine Receptors in the Rat Brain: Autoradiographic Localization Using [^{3}H]-SCH 23390." Eur. J. Pharmacol., 108:323-325 (1985).

5. Unis, A.S., **T.M. Dawson**, D.R. Gehlert and J.K. Wamsley. "Quantitative Autoradiographic Localization of [^{3}H]-Methylphenidate Binding Sites in Rat Brain." Eur. J. Pharmacol., 113:155-157 (1985).
6. Gehlert, D.R., **T.M. Dawson**, H.I. Yamamura and J.K. Wamsley. "Quantitative Autoradiography of [^{3}H]-Forskolin Binding Sites in the Rat Brain." Brain Res., 361:351-360 (1985).
7. **Dawson, T.M.**, D.R. Gehlert, R.T. McCabe, A. Barnett and J.K. Wamsley. "D-1 Dopamine Receptors in the Rat Brain: A Quantitative Autoradiographic Analysis." J. Neurosci., 6:2352-2365 (1986).
8. **Dawson, T.M.**, P. Barone, A. Sidhu, J.K. Wamsley and T.N. Chase. "Quantitative Autoradiographic Localization of D-1 Dopamine Receptors in the Rat Brain: Use of an Iodinated Ligand: [^{125}I]-SCH 23982." Neurosci. Lett., 68:261-266 (1986).
9. **Dawson, T.M.**, D.R. Gehlert and J.K. Wamsley. "Quantitative Autoradiographic Localization of the Dopamine Transport Complex in the Rat Brain: Use of a Highly Selective Radioligand: [^{3}H]-GBR 12935." Eur. J. Pharmacol., 126:171-173 (1986).
10. Gehlert, D.R., **T.M. Dawson**, A. Barnett, H.I. Yamamura and J.K. Wamsley. "Autoradiographic Localization of Dopamine Type-1 Receptors after Labeling with [^{3}H]-SCH 23390 in the Rat and Human Brain: Comparison with the Distribution of D-2 Receptors" In Modulation of Central and Peripheral Transmitter Function, eds. G. Biggio, P.F. Spano, G. Toffano and G.L. Gessa, FIDIA Research Series, Symposia in Neuroscience III, Liviana Press, Padova, Italy, pp. 27-35 (1986).
11. **Dawson, T.M.**, D.R. Gehlert and J.K. Wamsley. "Quantitative Autoradiographic Localization of Central Dopamine D-1 and D-2 Receptors." Adv. Exp. Med. Biol., 204:93-118 (1986).
12. McCabe, R.T., G.R. Hanson, **T.M. Dawson**, J.K. Wamsley and J.W. Gibb. "Methamphetamine - Induced Reduction in D_1 and D_2 Receptors as Evidenced by Autoradiography: Comparison with Tyrosine Hydroxylase Activity." Neurosci., 23:253-261 (1987).
13. Wamsley, J.K., W.F. Byerley, R.T. McCabe, E.J. McConnell, **T.M. Dawson** and B.I. Grosser. "Receptor Alterations Associated with Serotonergic Agents: An Autoradiographic Analysis." J. Clin. Psych., 48:3(Suppl.):19-25 (1987).
14. Byerley, W.F., E.J. McConnell, R.T. McCabe, **T.M. Dawson**, B.I. Grosser and J.K. Wamsley. "Chronic Administration of Sertraline, a Selective Serotonin Uptake Inhibitor, Decreased the Density of Beta-adrenergic Receptors in Rat Frontoparietal Cortex." Brain Res., 421:377-381 (1987).
15. Gehlert, D.R., **T.M. Dawson**, F.M. Filloux, E. Sanna, I. Hanbauer and J.K. Wamsley. "Evidence that [^{3}H]-Forskolin Binding in the Substantia Nigra Is Intrinsic to a Striatal-Nigral Projection: An Autoradiographic Study." Neurosci. Lett., 73:114-118 (1987).
16. **Dawson, T.M.**, R.T. McCabe, S.S. Stensaas and J.K. Wamsley. "Autoradiographic Evidence of [^{3}H]-SCH 23390 Binding Sites in Human Frontal Cortex (Brodman's Area #9)." J. Neurochem., 49:789-796 (1987).
17. Filloux, F.M., J.K. Wamsley and **T.M. Dawson**. "Presynaptic and Postsynaptic D-1 Dopamine Receptors in the Nigrostriatal System of the Rat Brain: A Quantitative Autoradiographic Study Using the Selective D-1 Antagonist [^{3}H]-SCH 23390." Brain Res., 408:205-209 (1987).
18. Filloux, F.M., J.K. Wamsley and **T.M. Dawson**. "Dopamine D-2 Auto- and Postsynaptic Receptors in the Nigrostriatal System of the Rat Brain: Localization by Quantitative Autoradiography with [^{3}H]-Sulpiride." Eur. J. Pharmacol., 138:61-68 (1987).
19. Byerley, W.F., E.J. McConnell, R.T. McCabe, **T.M. Dawson**, B.I. Grosser and J.K. Wamsley. "Decreased Beta-adrenergic Receptors in Rat Brain After Chronic Administration of the Selective Serotonin Uptake Inhibitor Fluoxetine." Psychopharmacol., 94:141-143 (1988).
20. Wamsley, J.K. and **T.M. Dawson**. "Receptor Localization in Neuropsychiatry." In Receptors and Ligands in Psychiatry eds. A.K. Sen and T. Lee, Cambridge University Press, Boston, MA, pp. 268-296 (1988).
21. Dawson, V.L., **T.M. Dawson** and J.K. Wamsley. "Autoradiographic Localization of Drug and Neurotransmitter Receptors in the Olfactory Bulb." In Molecular Neurobiology of the Olfactory System:

Molecular, Membranous, and Cytological Studies, eds. F.L. Margolis and T.V. Getchell, Plenum Press, New York, NY, pp. 99-117 (1988).

22. **Dawson, T.M.**, P. Barone, A. Sidhu, J.K. Wamsley and T.N. Chase. "The D-1 Dopamine Receptor: Quantitative Autoradiographic Localization Using an Iodinated Ligand." Neurosci., 26:83-100 (1988).
23. Dawson, V.L., **T.M. Dawson** , F. Filloux and J.K. Wamsley. "Evidence for Dopamine D-2 Receptors on Cholinergic Interneurons in the Rat Caudate-Putamen." Life Sci., 42:1933-1939 (1988).
24. Filloux, F., **T.M. Dawson** and J.K. Wamsley. "Localization of Nigrostriatal Dopamine Receptor Subtypes and Adenylate Cyclase." Brain Res. Bull., 20:447-459 (1988).
25. Wamsley, J.K., D.R. Gehlert, F.M. Filloux and **T.M. Dawson**. "Comparison of the Density and Distribution of D-1 and D-2 Dopamine Receptors in the Rat Brain." J. Chem. Neuroanat., 2:119-137 (1989).
26. Filloux, F., M.V. Wagster, S. Folstein, D.L. Price, J.C. Hedreen, **T.M. Dawson** and J.K. Wamsley. "Nigral Dopamine Type-1 Receptors are Reduced in Huntington's Disease: A Post-Mortem Autoradiographic Study Using [^{3}H]SCH 23390 and Correlation with [^{3}H]Forskolin Binding." Exp. Neurol., 110: 219-227 (1990).
27. Dawson, V.L., **T.M. Dawson** and J.K. Wamsley. "Muscarinic and Dopaminergic Receptor Subtypes on Striatal Cholinergic Interneurons." Brain Res. Bull. 25: 903-912 (1990).
28. **Dawson, T.M.**, V.L. Dawson, F.H. Gage, L.J. Fisher, M. A. Hunt and J.K. Wamsley. "Down Regulation of Muscarinic Receptors in the Rat Caudate-Putamen After Lesioning of the Ipsilateral Nigrostriatal Dopamine Pathway with 6-Hydroxydopamine (6-OHDA): Normalization by Fetal Mesencephalic Transplants." Brain. Res., 540: 145-152 (1991).
29. **Dawson, T.M.**, V.L. Dawson, F.H. Gage, L.J. Fisher, M.A. Hunt and J.K. Wamsley. "Functional Recovery of Supersensitive Dopamine Receptors After Intratriatal Grafts of Fetal Substantia Nigra." Exp. Neurol., 111: 282-292 (1991).
30. Wamsley, J.K., **T.M. Dawson**, V.L. Dawson, M.A. Hunt, L.J. Fisher and Fred H. Gage. "Reversal of Nigrostriatal-Lesion-Induced Receptor Alterations by Grafting of Fetal Mesencephalic Dopaminergic Neurons." Adv. Exp. Med. Biol., 287:221-235 (1991).
31. **Dawson, T.M**., D.S. Bredt, M. Fotuhi, P.M. Hwang and S.H. Snyder. "Nitric Oxide Synthase and Neuronal NADPH Diaphorase are Identical in Brain and Peripheral Tissue." Proc. Natl. Acad. Sci., U.S.A., 88:7797-7801 (1991).
32. Dawson, V.L., **T.M. Dawson**, E.D. London, D.S. Bredt and S.H. Snyder. "Nitric Oxide Mediates Glutamate Neurotoxicity in Primary Cortical Cultures." Proc. Natl. Acad. Sci., U.S.A. 88:6368-6371 (1991).
33. **Dawson, T.M.**, E. Lavi, E.C. Raps and H. Goldberg. "Thrombotic Microangiopathy Isolated to the Central Nervous System." Ann. Neurol., 30:843-846 (1991).
34. Bredt, D.S., P.M. Hwang, C.A. Glatt, M. Fotuhi, **T.M. Dawson** and S.H. Snyder. "Nitric Oxide Synthase Protein and mRNA are Discretely Localized in Neuronal Populations of Mammalian Central Nervous System Together with NADPH Diaphorase." Neuron, 7:615-624 (1991).
35. Lynch, D.R., **T.M. Dawson**, E.C. Raps and S.M. Galetta. "Neurologic Complications of Aortic Aneurysms." Arch. Neurology, 49:284-288 (1991).
36. Arriza, J.L., **T.M. Dawson**, R.B. Simerly, L.J. Martin, M.G. Caron, S.H. Snyder and R.J. Lefkowitz. "The G Protein-Coupled Receptor Kinase's BARK1 and BARK2 are Widely Distributed at Synapses in the Rat Brain." J. Neurosci., 12:4045-4055 (1992).
37. **Dawson, T.M.**, V.L. Dawson and S.H. Snyder. "A Novel Neuronal Messenger Molecule in Brain: The Free Radical, Nitric Oxide (NO)." Ann. Neurol., 32: 297-311 (1992).
38. Hyman, B.T., K. Marzloff, J. Wenniger, **T.M. Dawson**, D.S. Bredt and S.H. Snyder. "Relative Sparing of Nitric Oxide Synthase Containing Neurons in the Hippocampal Formation in Alzheimer's Disease." Ann Neurol., 32:818-820 (1992).

39. Steiner, J.P., **T.M. Dawson**, M. Fotuhi, C.E. Glatt, A.M. Snowman, N. Cohen and S.H. Snyder. "High Brain Densities of the Immunophilin FKBP Co-Localized with Calcineurin." Nature, 358:584-587 (1992).

40. Attramadal,H., J.L. Arriza, C. Aoki, **T.M. Dawson**, J. Codina, M.M. Kwatra, S.H. Snyder, M.G. Caron and R.J. Lefkowitz. "ßArrestin2 - A Novel Member of the Arrestin/ßArrestin Gene Family." J. Biol. Chem., 41:17882-17890 (1992).

41. Mourey, R.J., **T.M. Dawson**, R.K. Barrow, A. Enna and S.H. Snyder. "[^{3}H]Noscapine Binding Sites in Brain: Relationships to Indoleamines and the Phosphoinositide and Adenylyl Cyclase Messenger Systems." Mol. Pharmacol., 42:619-626 (1992).

42. Nozaki, K., M.A. Moskowitz, K.I. Maynard, N. Koketsu, **T.M. Dawson**, D.S. Bredt and S.H. Snyder. "Possible Origins and Distribution of Immunoreactive Nitric Oxide Synthase Nerve Fibers in Cerebral Arteries." J. Cereb. Blood Flow Metab., 13:70-79 (1993).

43. Hartung, H.-P., J. Zielasek, K.V. Toyka and Reply by **T.M. Dawson**. "Reactive Nitrogen Intermediates: Effector Molecules of Immune-Mediated Inflammatory Nervous System Disorders?" Ann. Neurol., 33: 422 (1993).

44. **Dawson, T.M.**, J.L. Arriza, D.E. Jaworsky, F.F. Borisy, H. Attramadal, R.J. Lefkowitz and G.V. Ronnett. "ß-Adrenergic Receptor Kinase and ß-Arrestin-2 as Mediators of Olfactory Desensitization." Science , 259: 825-829 (1993).

45. Fotuhi, M., A.H. Sharp, C.E. Glatt, P.M. Hwang, M. Von Krosigk, S.H. Snyder and **T.M. Dawson**. "Differentila Localization of the Phosphoinositide Linked Metabotropic Glutamate Receptor (mGluR1) and the Inositol 1,4,5-Triphosphate Receptor in Rat Brain." J. Neurosci., 13: 2001-2012 (1993).

46. Sharp, A.H., **T.M. Dawson**, C.A. Ross, M. Fotuhi, R.J. Mourey and S.H. Snyder. "Inositol (1,4,5) Triphosphate Receptors: Immunohistochemical Localization to Discrete Areas of Rat Brain." Neuroscience, 53: 927-942 (1993).

47. **Dawson, T.M.** "Cerebral endothelial nitric oxide synthase expresssion after focal cerebral ischemia in rat." Editorial Comment. Stroke, 24: 2021-2022 (1993).

48. Dawson, V.L., **T.M. Dawson,** D. A. Bartley, G.R. Uhl and S.H. Snyder. "Mechanisms of Nitric Oxide Mediated Neurotoxicity in Primary Brain Cultures." J. Neurosci., 13:2651-2661 (1993).

49. Sharp, A.H., P.S. McPherson, **T.M. Dawson**, C. Aoki, K.P. Campbell and S.H. Snyder. "Differential Immunohistochemical Localization of Inositol 1,4,5,-Triphosphate and Ryanodine - Sensitive Ca^{2+} Release Channels in Rat Brain." J. Neurosci., 13:3051-3063 (1993).

50. Fotuhi, M., **T.M. Dawson**, A.H. Sharp, L.J. Martin, A.M. Graybiel and S.H. Snyder. "Phosphoinositide Second Messenger System is Enriched in Striosomes: Immunohistochemical Demonstration of Inositol 1,4,5-Triphosphate Receptors and Phospholipase C, ß and g in Primate Basal Ganglia." J. Neurosci., 13:3300-3308 (1993).

51. Dawson, V.L., **T.M. Dawson,** G.R. Uhl and S.H. Snyder. "Human Immunodeficiency Virus Type 1 Coat Protein Neurotoxicity Mediated by Nitric Oxide in Primary Cortical Cultures." Proc. Natl. Acad. Sci., U.S.A. , 90: 3256-3259 (1993).

52. **Dawson, T.M.**, J. P. Steiner, V.L. Dawson, J.L. Dinerman, G.R. Uhl and S.H. Snyder. "Immunosuppressant, FK506 Enhances Phosphorylation of Nitric Oxide Synthase and Protects Against Glutamate Neurotoxicity." Proc. Natl. Acad. Sci., U.S.A., 90: 9808-9812 (1993).

53. Hirsch, D.B., J.P. Steiner, **T.M.Dawson**, D.B. Hirsch, A. Mammen, E. Hayek and S.H. Snyder. "Neurotransmitter Release Regulated by Nitric Oxide in PC-12 Cells and Brain Synaptosomes." Current Biology, 3: 749-754 (1993).

54. Yamamoto, R., D.S. Bredt, **T.M. Dawson**, S.H. Snyder and R.A. Stone "Enhanced Expression of Nitric Oxide Synthase by Rat Retina Following Pterygopalatine Parasympathetic Denervation." Brain Res.,631:83-88 (1993).

55. McEnery, M.W., **T.M. Dawson**, A. Verma, D. Gurley, M. Colombini, and S.H. Snyder. "Mitochondrial Voltage-Dependent Anion Channel: Immunochemical and Immunohistochemical Characterization in Rat Brain." J. Biol. Chem., 268: 23289-23296 (1993).

56. Huang, P.L. **T.M. Dawson**, D.S. Bredt, S.H. Snyder and M.C. Fishman. "Targeted Disruption of Neuronal Nitric Oxide Synthase." Cell, 75: 1273-1286 (1993).

57. **Dawson, T.M.**, V.L. Dawson and S.H. Snyder. "Nitric Oxide as a Mediator of Neurotoxicity."In Assessing Neurotoxicity of Drugs of Abuse, ed. L. Erinoff, NIDA Research Monograph Series, Vol., 136, pp. 258-273 (1993).

58. **Dawson, T. M.** "Nitric Oxide and the Nervous System." in Cell and Molecular Neuroscience, American Academy of Neurology, 126: 21-37 (1993).

59. Zhang, J., V.L. Dawson, **T.M. Dawson** and S.H. Snyder. "Nitric Oxide Activation of Poly (ADP-Ribose) Synthetase in Neurotoxicity." Science, 263:687-689 (1994).

60. **Dawson, T.M.** "Effect of Carbon Monoxide on Rabbit Cerebral Arteries." Editorial Comment. Stroke, 25:643-644 (1994).

61. **Dawson, T.M.** and S.H. Snyder. "Gases as Biologic Messengers: Nitric Oxide and Carbon Monoxide in the Brain." J. Neurosci., 14:5147-5159 (1994).

62. Aoki, C., C. Venkatesan, C.-G. Go, J.A. Mong and **T.M. Dawson** "Cellular and Subcellular Localization of NMDA-R1 Subunit Immuonreactivity in the Visual Cortex of Adult and Neonatal Rats." J. Neurosci., 14:5202-5222 (1994).

63. **Dawson, T.M.**, V.L. Dawson and S.H. Snyder. "Molecular Mechanisms of Nitric Oxide Actions in the Brain." In The Neurobiology of NO• and •OH. ed. C. C. Chieuh, D.L. Gilbert, C.A. Coulton, Annals of the New York Academy of Science. 738:76-85 (1994).

64. **Dawson, T.M.**, J. Zhang, V.L. Dawson and S.H. Snyder. "Nitric Oxide: Cellular Regulation and Neuronal Injury" In Proceedings of the 5th International Symposium on Neurodegeneration. ed. F.J. Siel, Progress in Brain Research, 103:365-369 (1994).

65. Lyons, W.E., E.B. George, **T.M. Dawson**, J.P. Steiner and S. H. Snyder "Immunosuppressant FK506 Promotes Neurite Outgrowth in Cultures of PC12 Cells and Sensory Ganglia." Proc. Natl. Acad. Sci., U.S.A., 91:3191-3195 (1994).

66. **Dawson, T.M.**, and V.L. Dawson. "gp120 Neurotoxicity in Primary Cortical Cultures." Advance in Neuroimmunology, 4:167-173 (1994).

67. Kovach, A.G.B., Z. Lohinai, J. Marczis, I. Balla, Z. Vass, M. Reivich, **T.M. Dawson** and S.H. Snyder. "Regional Cerebral and Spinal Blood Flow, Nitric Oxide Synthase Catalytic Activity and Microelectrode Measured Cortical Nitric Oxide Content in 7-Nitro Indazole Treated Cats, in Biology of Nitric Oxide eds. S. Moncada, M. Felisch, R. Busse, E.Z. Higgs, Portland Press, Ltd., London and Chapel Hill. 3:338-344 (1994).

68. Dinerman, J.L., **T.M. Dawson**, M. J. Schell, A. Snowman and S.H. Snyder. "Endothelial Nitric Oxide Synthase Localized to Hippocampal Pyramidal Cells: Implications for Synaptic Plasticity." Proc. Natl. Acad. Sci., U.S.A., 91:4214-4218 (1994).

69. Saito, S., G.J. Kidd, B.D. Trapp, **T.M. Dawson**, D. S. Bredt, D.A. Wilson, R.J. Traystman, S.H. Snyder and D.F. Hanley. "Rat Spinal Cord Neurons Contain Nitric Oxide Synthase." Neurosci., 59:447-456 (1994).

70. Kovach, A.G.B., Z. Lohinai, J. Marczis, I. Balla, **T.M. Dawson** and S.H. Snyder. "The Effect of Hemorrhagic Hypotension and Retransfusion and 7-Nitroindazole on rCBF, NOS catalytic activity and Cortical NO Content in the Cat." In The Neurobiology of NO• and •OH. ed. C. C. Chieuh, D.L. Gilbert, C.A. Coulton, Annals of the New York Academy of Science. 738:348-368 (1994).

71. **Dawson, T.M.** "Spinal Cord Infarcts During Long-Term Inhibition of Nitric Oxide Synthase." Editorial Comment, Stroke, 25:1673 (1994)

72. **Dawson, T.M.** , J.P. Steiner, W. E. Lyons, M. Fotuhi, M. Blue and S.H. Snyder. "The Immunophilins, FKBP and Cyclophilin, are Discretely Localized in the Brain: Relationship to Calcineurin." Neurosci., 62:569-580 (1994).

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