

## CURRICULUM VITAE

NAME: Wilkie Andrew Wilson, Jr.

Address: 302 Watts Street  
Durham, North Carolina 27701  
Phone: (919) 949-8063

EDUCATION: Louisiana State University  
Baton Rouge, Louisiana  
Major: Electrical Engineering  
BSEE, 1966

Duke University  
Durham, North Carolina  
Advisor Howard Wachtel, Ph.D.  
*A Voltage Clamp Analysis of Slow Waves and Prolonged  
Synaptic Potentials in Bursting Neurons*  
Dept: Biomedical Engineering & Physiology  
Ph.D., 1971

POSTGRADUATE TRAINING: Physiologist and Biomedical Engineer  
Epilepsy Center  
Durham Veterans Administration Medical Center  
1971 - 1973

Associate, Department of Physiology and  
Pharmacology  
Duke University Medical Center  
1973 - 1977

ACADEMIC APPOINTMENTS:

VA appointments: Director of Neurophysiology Laboratory  
Epilepsy Center  
VA Medical Center  
1977 - 1984

Associate Research Career Scientist  
1984 - 1988

Research Career Scientist  
1988 - 2010

Emeritus since 2011

Duke University appointments: Associate, Department of Physiology & Pharmacology  
1973-1977

Member of Graduate Faculty  
1975-present

Asst. Medical Research Professor of Medicine &  
Pharmacology  
1977-1980

Associate Medical Research Professor of Pharmacology  
1981-1991

Associate Medical Research Professor of Medicine  
1985-2010

Medical Research Professor of Pharmacology  
1991-2009  
Course organizer for Neurology Residents

Supervisor of Medical Students in  
Neuroscience Training Program

Director, Neuropharmacology Course  
1990 – 1997

Director, DukeLEARN  
([www.dukelearn.com](http://www.dukelearn.com))

Professor of Prevention Science  
Duke University  
2009-Present

**INTERNATIONAL & NATIONAL  
PROFESSIONAL ACTIVITIES:**

Chairman, Veterans Administration  
Central Office Merit Review Panel for  
Regeneration Research Program  
1990

Member, International Commission on  
Neurobiology of Epilepsy  
1990 - 1994

Member, Governing Committee for the Workshop on  
Neurobiology of Epilepsy International League Against  
Epilepsy  
1989 - 1998

Member, Epilepsy Foundation of America  
Grants and Review Study Board  
1983 – 1988; 1990 - 1995

Member, Veterans Administration Central Office Board of  
Merit Review Appeals

1990 - 1993

Member, Epilepsy Foundation of America  
Professional Advisory Board  
1985 - 1989

NIH and VA Study Sections - Ad Hoc  
1979 and continuing

Member, Veterans Administration Study  
Section for Career Research Scientists  
1985 - 1987

Field Editor, *Epilepsy Advances*  
1985 - 1989

Chairman and Organizer  
Investigators Workshop  
American Epilepsy Society  
1985 - 1989

Member, Long Range Planning Committee  
American Epilepsy Society  
1987 - 1998

Member, NIH Liaison Committee  
American Epilepsy Society  
1988 - 1995

Consulting Editor, *Epilepsy Research*  
1989 - 1999

Senior Editor  
3rd Edition *Jasper's Basic Mechanisms of the Epilepsies*  
1995 - 2000

Councilor  
American Epilepsy Society  
1991 - 1996

Chairperson  
Neurological Sciences Initial Review Group  
Special Emphasis Panel - ZRG1-NLS-1  
1995 - 1996

Program Specialist in Neurobiology  
Veterans Administration  
1991 - 1997

Consultant in Instrumentation Design  
Dagen Corp.

Minneapolis, Minnesota

1976

Consultant for Wyeth Ayerst Pharmaceuticals for evaluation of potential anticonvulsant drugs

1997 – 2000

Consultant for Icagen Pharmaceuticals for analysis of drug actions in small neural networks

1998 – 2001

Consultant for Krenitsky Pharmaceuticals for analysis of neuroactive drugs

1999 – 2001

Consultant for Orphan Medical for studies of gamma-hydroxybutyrate

2000 – 2001

Consultant for Amgen Corporation for studies of long-term potentiation

2002-2003

Member, Search Committee for Chair, Duke Pain Program  
1999

Legal Expert in civil and criminal cases

**SOCIETIES, SCIENTIFIC:**

Society for Neuroscience

N.C. Society for Neuroscience

American Epilepsy Society

American Physiological Society

**HONORS AND AWARDS:**

Sigma Xi

Tau Beta Phi

Phi Kappa Phi

Eta Kappa Nu

**RESEARCH INTERESTS:**

Long-term:

Neuropharmacology of recreational drugs

Current Projects:

1. Alcohol effects on the CNS
2. Unique effects of recreational drug on the adolescent brain
3. Incorporation of neuroscience into educational curricula
4. Co-PI of Education Core of Smoking Cessation Center

**POSTDOCTORAL FELLOWS TRAINED:**

Gary Evans, Ph.D.

Senior Scientist

Becton Dickinson & Co. Research Center

Research Triangle Park, N.C.

William F. Colmers, Ph.D.  
Professor  
Department of Pharmacology  
University of Alberta  
Edmonton, Alberta, Canada

Andrew Bragdon, M.D.  
Associate Professor of Neurology  
Syracuse University  
Syracuse, N.Y.

Scott Swartzwelder, Ph.D.  
Professor  
Department of Psychiatry  
Duke University  
Durham, N.C.

Leslie S. Jones, Ph.D.  
Associate Professor  
Department of Anatomy  
Univ. of South Carolina  
Columbia, S.C.

Darrell V. Lewis, M.D.  
Professor Emeritus  
Department of Pediatrics (Neurology)  
Duke University Medical Center  
Durham, N.C.

Michael J. Iadarola, Ph.D.  
Branch Chief  
NIH, NIMH  
Washington, D. C.

Richard Morrisett, Ph.D.  
Professor  
Division of Pharmacology & Toxicology  
College of Pharmacy  
University of Texas  
Austin, TX

David Martin, Ph.D.  
Senior Scientist  
Amgen Pharmaceuticals  
Thousand Oaks, CA

Hisashi Kojima, M.D.  
Assistant Professor of Neurosurgery  
Akita University Medical Center  
Akita, Japan

Scott D. Moore, M.D., Ph.D.  
Associate Professor

Department of Psychiatry  
Duke University

Nevin A. Lambert, Ph.D. 1993-1997  
Associate Professor  
Department of Pharmacology & Toxicology  
Medical College of Georgia  
Augusta, GA

Maenghee Kang Park, Ph.D.  
Assistant Professor  
Department of Psychiatry  
Duke University

Suzanne Clark, Ph.D.  
Assistant Professor  
University of Wyoming

Chunsheng Wang, MD, PhD  
Assistant Professor  
Department of Psychiatry  
Duke University

Qiang Li, MD, Ph.D.  
Assistant Professor  
Department of Psychiatry  
Duke University

Byung Joon Choi, M.D.  
Associate Professor  
Department of Pediatrics  
Catholic University Medical College  
Soul, South Korea

Katherine Jones, Ph.D.  
Research Administration  
VA Medical Center  
Durham, NC

**GRADUATE STUDENTS SUPERVISED  
AND CURRENT POSITIONS:**

Terry Pellmar, Ph.D. (1977)  
Scientific Director, Armed Forces Radiobiology Institute  
Bethesda, MD

Ila L. Cote, Ph.D. (1979)  
Emeritus Head, Air Program at Health Effects Research Lab  
Environmental Protection Agency  
Research Triangle Park, NC

Kerry Zbicz, Ph.D. (1979)  
Senior Scientist  
Glaxo Wellcome Corp.

Research Triangle Park, N.C.

Sidney Gospe, MD, Ph.D. (1980)  
Chairman, Dept. Pediatric Neurology  
University of Washington  
Seattle, WA

Ruth Wachtel, Ph.D. (1980)  
Associate Professor  
Department of Physics & Biophysics  
University of Iowa Medical Center  
Iowa City, Iowa

John Huguenard, Ph.D. (1983)  
Professor  
Department of Neurology  
Stanford University  
Palo Alto, California

Steven Stasheff, M.D., Ph.D. (1991)  
Assistant Professor  
University of Iowa  
Iowa City, IA

David Mott, Ph.D. (1991)  
Associate Professor  
University of South Carolina  
Columbia, SC

Donald Taylor, M.D., Ph.D. (1991)  
Associate Professor of Anesthesiology  
University of California  
San Francisco, CA

Deborah Barr, Ph.D. (1994)  
Medical Writer  
Orlando Sentinel  
Orlando, FL

Suzanne Clark, Ph.D. (1995)  
Assistant Professor  
University of Wyoming  
Laramie, WY

COMMUNITY LEADERSHIP SERVICE  
1980-present

President of Trinity Park Association  
(a neighborhood association)

Member, Administrative Board, Duke Memorial  
Methodist Church

Member, System-wide Advisory Board, Durham Schools

Member, Durham County Commissioners' School Merger Task Force

Durham Public Schools Budget Advisory Committee

Advisor, Center for Substance Abuse Research  
University of Maryland

Member, North Carolina Drug Treatment Court Advisory Committee

Columnist, Health Sector Salon.com

Expert witness for the defense in capital murder cases

### **Journal Articles:**

David, R.J., **W.A. Wilson** and A.V. Escueta: Voltage Clamp Analysis of Pentylentetrazol on Aplysia Neurons. Brain Res., 67:549, 1974.

**Wilson, W.A.** and A.V. Escueta: Common Synaptic Effects of Pentylentetrazol and Penicillin. Brain Res., 72:168, 1974.

Escueta, A.V., J. Boxley, N. Stubbs, G. Waddell and **W.A. Wilson**: Prolonged Twilight State and Automatism. Neurology, 24:331, 1974.

**Wilson, W.A.** and H. Wachtel: A Negative Resistance Characteristic Essential for the Maintenance of Slow Oscillation in Bursting Neurons. Science, 86:932-934, 1974.

**Wilson, W.A.** and M. Goldner: Voltage Clamping with a Single Microelectrode. J. Neurosci Meth., 6:411-422, 1975.

**Wilson, W.A.**, M.T. Clark and T. Pellmar: Tris Buffer Attenuates Acetylcholine Responses in Aplysia Neurons. Science, 196:440-441, 1977.

Pellmar, T. and **W.A. Wilson**: Penicillin Effects on Iontophoretic Responses in Aplysia californica. Brain Research, 136:89-101, 1977.

Dunn, P.F. and **W.A. Wilson**: Development of the Single Microelectrode Current and Voltage Clamp for Central Nervous System Neurons. Electroencephalography & Clinical Neurophysiology, 43:752-756, 1977.

Pellmar, T. and **W.A. Wilson**: Synaptic Mechanism of Pentylentetrazol: Reduction of Chloride Conductance. Science, 197:912-914, 1977.

Pellmar, T. and **W.A. Wilson**: Unconventional Serotonergic Excitation in Aplysia. Nature, 296:76-79, 1977.

Parmentier, J.L., T. Narahashi, **W.A. Wilson**, N.M. Trieff, V.M.S. Ramanujam, M.A. Risk, S.M. Ray: Electrophysiological and Biochemical Characteristics of Gynnodinium Breve Toxins. Toxicon, 16:235-244, 1978.



Cote, I.L., K.L. Zbicz and **W.A. Wilson**: Barbiturate Induced Slow Outward Current in Aplysia Neurons. Nature, 274:594-597, 1978.

**Wilson, W.A.** and H. Wachtel: Prolonged Inhibition in Burst Firing Neurons: Synaptic Inactivation of the Slow Regenerative Inward Current. Science, 202:772-775, 1978.

Cote, I.L. and **W.A. Wilson**: Effects of Barbiturates on Inhibitory and Excitatory Responses to Applied Neurotransmitters in Aplysia. J. Pharm. Exp. Ther., 214:161-165, 1980.

Gospe, S.M. and **W.A. Wilson**: Dopaminergic Inhibition of Aplysia Burst Firing Neuron R15. J. Pharm. Exp. Ther., 214:112-118, 1980.

Johnston, D., J. Hablitz and **W.A. Wilson**: Voltage Clamp Disclosures Slow Inward Current in Hippocampal Burst-Firing Neurons. Nature, 286:391-393, 1980.

Zbicz, K. and **W.A. Wilson**: Barbiturate Inhibition of Sustained Firing in Aplysia Giant Neurons. J. Pharm. Exp. Ther., 217: 222-227, 1981.

Gospe, S.M. and **W.A. Wilson**: Pharmacological Studies of a Novel Dopamine Receptor Mediating Burst-Firing Inhibition of Neurosecretory Cell R15 in Aplysia californica. J. Pharm. Exp. Ther., 216:368-377, 1981.

Lewis, D.V., K.L. Zbicz, M.E. Nepp and **W.A. Wilson**: Diphenylhydantoin Enhances Early Adaptation in Aplysia Giant Neurons. J. Pharm. Exp. Ther., 218:41-46, 1981.

Wachtel, R.E. and **W.A. Wilson**: Use of the Single Electrode Voltage Clamp to Perform Noise and Relaxation Studies of Acetylcholine Activated Channels in Aplysia Neurons. J. Neurosci. Methods, 4:87-103, 1981.

Gospe, S.M., Jr., L.L. Cook, K.A. Crutcher and **W.A. Wilson**: Biochemical and Histochemical Studies of the Effect of Reserpine in Aplysia californica. J. Comp. Biochem. Physiol., 70C:273-276, 1981.

Gospe, S.M., Jr. and **W.A. Wilson**: Burst-Firing Inhibition of Cell R15 in Aplysia californica: Pharmacological Studies of the Effects of Tyramine, Beta-Phenethylamine and d-Amphetamine. J. Comp. Biochem. Physiol., 71C(2):249-254, 1982.

Lewis, D.V. and **W.A. Wilson**: Calcium Influx and the Post-Stimulus Current During Early Adaptation in Aplysia Giant Neurons. J. Neurophysiol., 48:202-216, 1982.

Colmers, W.F., D.V. Lewis and **W.A. Wilson**: Cs<sup>+</sup> Loading Reveals Na<sup>+</sup>-Dependent Persistent Inward Current and Negative Slope Resistant Region in Aplysia Giant Neurons. J. Neurophysiol., 48:1191-1200, 1982.

Wachtel, R.E. and **W.A. Wilson**: Barbiturate Effects on Acetylcholine-Activated Channels in Aplysia Neurons. Mol. Pharm., 24:449-457, 1983.

Lewis, D.V., G.J. Evans and **W.A. Wilson**: Dopamine Reduces Slow Outward Current and Calcium Influx in Burst Firing Neurons R15 of Aplysia. J. Neurosci., 4(12):3014-3020, 1984.

- Iadarola, M.J., R.J. Fanelli, J.O. McNamara and **W.A. Wilson**: Comparison of the Effects of Diphenylbarbituric Acid, Pheno-, Pento- and Secobarbital in GABA-Mediated Inhibition and Benzodiazepine Binding. J. Pharm. Exp. Ther., 232:127-133, 1985.
- Huguenard, J.R. and **W.A. Wilson**: Suppression of Repetitive Firing in Neurons Diphenylbarbituric Acid. J. Pharm. Exp. Ther., 232:228-231, 1985.
- Huguenard, J.R., K.L. Zbicz, D.V. Lewis, G.J. Evans and **W.A. Wilson**: The Ionic Mechanism of the Slow Outward Current in Aplysia Neurons. J. Neurophysiol., 54(2):449-461, 1985.
- Stasheff, S.F., A.C. Bragdon and **W.A. Wilson**: Induction of Epileptiform Activity in Hippocampal Slices by Trains of Electrical Stimuli. Brain Res., 344:296-302, 1985.
- Huguenard, J.R. and **W.A. Wilson**: Barbiturate-Induced Alternations in the Kinetic Parameters of Slow Outward Current in Aplysia Giant Neurons. J. Pharm. Exp. Ther., 234:821-829, 1985.
- Swartzwelder, H.S., A.C. Bragdon, C.P. Sutch, B. Ault and **W.A. Wilson**: Baclofen Suppresses Hippocampal Epileptiform Activity at Low Concentrations Without Suppressing Synaptic Transmission. J. Pharm. Exp. Ther., 237:881-887, 1986.
- Jones, L.S., G.J. Evans, **W.A. Wilson** and D.V. Lewis: A Novel, Calcium-Induced Triphasic Current Response in Non-Bursting Aplysia Neurons. Brain Res., 385:46-50, 1986.
- Bragdon, A.C., D.M. Taylor and **W.A. Wilson**: Potassium-Induced Epileptiform Activity in Area CA3 Varies Markedly Along the Septotemporal Axis of the Rat Hippocampus. Brain Res., 378:169-173, 1986.
- Swartzwelder, H.S., C.P. Sutch and **W.A. Wilson**: Attenuation of Epileptiform Bursting by Baclofen: Reduced Potency in Elevated Potassium. Experimental Neurology, 94:726-734, 1986.
- Anderson, W.W., H.S. Swartzwelder and **W.A. Wilson**: The NMDA Receptor Antagonist 2-Amino-5-Phosphonovalerate Blocks Stimulus Train Induced Epileptogenesis but not Epileptiform Burst Activity in the Rat Hippocampal Slice. J. Neurophysiol., 57(1):1-21, 1987.
- Swartzwelder, H.S., H.A. Tilson, R.L. McLamb and **W.A. Wilson**: Baclofen Disrupts Passive Avoidance Retention. Psychopharmacology, 92:398-401, 1987.
- Anderson, W.W., D.V. Lewis, H.S. Swartzwelder and **W.A. Wilson**: Magnesium-Free Medium Activates Seizure-like Events in the Rat Hippocampal Slice. Brain Res., 398:215-219, 1986.
- Swartzwelder, H.S., D.V. Lewis, W.W. Anderson and **W.A. Wilson**: Seizure-like Events in Brain Slices: Suppression by Interictal Activity. Brain Res., 410:362-366, 1987.
- Swartzwelder, H.S. and **W.A. Wilson**: Differential Effects of Phenobarbital and Pentobarbital on Stimulus Train-Induced Bursting in the Hippocampal Slice. Epilepsia, 28(3):207-213, 1987.
- Bragdon, A.C., D.M. Taylor, J.O. McNamara and **W.A. Wilson**: Abnormal Hyper-excitability of Hippocampal Slices from Kindled Rats in Transient. Brain Res., 453:257-264, 1988.

Swartzwelder, H.S., W.W. Anderson, **W.A. Wilson**: Mechanism of Electrographic Seizure Generation in the Hippocampal Slice in Mg<sup>++</sup>-free Medium: The Role of GABA<sub>A</sub> Inhibition. Epilepsy Res., 2:239-245, 1988.

Swartzwelder, H.S., K. L. Farr, **W.A. Wilson**, and D.D. Savage: Prenatal Exposure to Ethanol Decreases Physiological Plasticity in the Hippocampus of the Adult Rat. Alcohol, 5:121-124, 1988.

**Wilson, W.A.**, H.S. Swartzwelder, W.W. Anderson, and D.V. Lewis: Seizure Activity in Vitro: A Dual Focus Model. Epilepsy Res., 2:289-293, 1988.

Sidel, E.S., H.A. Tilson, R.L. McLamb, **W.A. Wilson**, and H.S. Swartzwelder: Potential Interactions between GABA<sub>B</sub> and cholinergic systems: Baclofen augments scopolamine-induced performance deficits in the eight-arm radial maze. Psychopharmacology 96:116-120, 1988.

Swartzwelder, H.S., C. Ferrari, W.W. Anderson, and **W.A. Wilson**: MK-801 attenuates the development, but not the expression, of long-term potentiation and stimulus train induced bursting in hippocampal slices. Neuropharmacology, 28:441-445, 1989

Mott, D.D., A.C. Bragdon, D.V. Lewis, and **W.A. Wilson**: Baclofen has a proepileptic effect in the dentate gyrus. J. Pharm Exp. Ther. 249:721-725, 1989.

Stasheff, S.F. W.W. Anderson, S. Clark, and **W.A. Wilson**: NMDA Antagonists differentiate epileptogenesis from seizure expression in an *in vitro* seizure model. Science, 245:648-651, 1989.

Morrisett, R.A., D. Martin, **W.A. Wilson**, D.D. Savage, and H.S. Swartzwelder: Prenatal exposure to ethanol decreases the sensitivity of the adult hippocampus to N-Methyl-D-Aspartate. Alcohol, 6:415-420, 1989.  
Stasheff, S.F. and **W.A. Wilson**: Increased Ectopic Action Potential Generation Accompanies Epileptogenesis in vitro. Neurosci. Letters, 111:144-150, 1990.

Mott, D.D., D.V. Lewis, C.M. Ferrari, **W.A. Wilson** and H.S. Swartzwelder: Baclofen Facilitates the Development of Long-term Potentiation in the Rat Dentate Gyrus. Neurosci. Lett. 113:222-226, 1990.

Morrisett, R.A., A.H. Rezvani, D. Overstreet, D.S. Janowsky, **W.A. Wilson** and H.S. Swartzwelder: MK-801 Potently Inhibits Alcohol Withdrawal Seizures in Rats. Eur. J. of Pharm., 176:103-105, 1990.

Morrisett, R.A., D.D. Mott, D.V. Lewis, **W.A. Wilson** and H.S. Swartzwelder: Reduced Sensitivity of the N-Methyl-D-Aspartate Component of Synaptic Transmission to Magnesium in Hippocampal Slices from Immature Rats. Dev. Brain Res., 56:257-262, 1990.

Lee, P., C.W. xie, D.V. Lewis, **W.A. Wilson**, C.L. Mitchell and J.S. Hong: Opioid-induced Epileptiform Bursting in Hippocampal Slices: Higher Susceptibility in Ventral than Dorsal Hippocampus. JPET, 253(2):545-551, 1990.

Anderson, W.W., S.F. Stasheff, H.S. Swartzwelder, and **W.A. Wilson**: Regenerative all-or-none Electrographic Seizures in the Rat Hippocampal Slice in Mg-free and Physiological Medium. Brain Res., 532:288-298, 1990.

McLamb, R.L., L.R. Williams, K.P. Nanry, **W.A. Wilson**, and H.A. Tilson: MK-801 Impedes the Acquisition of a Spacial Memory Task in Rats. Pharm., Biochem. & Behavior, 37(1):41-45, 1990.

Morrisett, R.A., D.D. Mott, D.V. Lewis, H.S. Swartzwelder and **W.A. Wilson**: GABA<sub>B</sub>-Receptor Mediated Inhibition of the N-Methyl-D-Aspartate Component of Synaptic Transmission in Rat Hippocampus. J. Neurosci. 11(1):203-209, 1991.

Morrisett, R.A., D. Martin, T.A. Oetting, D.V. Lewis, **W.A. Wilson** and H.S. Swartzwelder: Ethanol and Mg<sup>++</sup> Inhibit N-Methyl-D-Aspartate Mediated Synaptic Potentials in an Interactive Manner. Neuropharm., 30(11):1173-1178, 1991.

Martin, D., R.A. Morrisett, X-P. Bian, **W.A. Wilson** and H.S. Swartzwelder: Ethanol Inhibition of NMDA mediated Depolarizations is increased in the presence of Mg<sup>2+</sup>. Brain Res., 546:227-234, 1991.

Hosford, D.A., Clark, S., Cao, Z., **Wilson, W.A.**, Lin, F., Morrisett, R.A. and Huin, A.: Role of GABA<sub>B</sub> receptor activation in absence seizures of lethargic (lh/lh) mice. Science, 257:398-401, 1992.

Brucato, F.H., Morrisett, R.A., **Wilson, W.A.** and Swartzwelder, H.S.: The GABA<sub>B</sub> receptor antagonist, CGP-35348, inhibits paired pulse disinhibition in the rat dentate gyrus in vivo. Brain Res., 588:150-153, 1992.

Bragdon, A.C., H. Kojima and **W.A. Wilson**: Suppression of interictal bursting in hippocampus unleashes seizures in entorhinal cortex: A proepileptic effect of lowering [K<sup>+</sup>]<sub>B</sub> and raising [Ca<sup>2+</sup>]<sub>B</sub>. Brain Res., 590:128-135, 1992.

Morrisett, R.A., Lewis, D.V., Swartzwelder, H.S. and **Wilson, W.A.**: Antiepileptic effects of GABA<sub>B</sub> receptor activation in area CA3 of rat hippocampus. Brain Res., 600:235-242, 1993.

Cohen, S.M., Martin, D., Morrisett, R.A., **Wilson, W.A.** and Swartzwelder, H.S.: Proconvulsant and anticonvulsant properties of ethanol: Studies of electrographic seizures in vitro. Brain Res., 601:80-87, 1993.

Lambert, N.A. and Wilson, W.A.: Discrimination of post-and presynaptic GABA<sub>B</sub> receptor-mediated responses by tetrahydroaminoacridine in area CA3 of the rat hippocampus. J. Neurophysiol., 69:630-635, 1993.

Mott, D.D., Xie, C.W., **Wilson, W.A.**, Swartzwelder, H.S. and Lewis, D.V.: GABA<sub>B</sub> autoreceptors mediate activity-dependent disinhibition and enhance signal transmission in the dentate gyrus. J. Neurophysiol., 69:674-691, 1993.

Stasheff, S.F., Hines, M. and Wilson, W.A.: Axon terminal hyperexcitability associated with epileptogenesis in vitro: I. Origin of ectopic spikes. J. Neurophysiol., 70:961-975, 1993.

Stasheff, S.F., Mott, D.D., **Wilson, W.A.**: Axon terminal hyperexcitability associated with epileptogenesis in vitro: II. Pharmacological regulation by NMDA and GABA<sub>A</sub> receptors. J. Neurophysiol., 70:976-984, 1993.

Moore, S.D., Barr, D. and **Wilson, W.A.**: Seizure-like activity disrupts LTP in vitro. Neurosci. Letts., 163:117-119, 1993.

Lambert, N.A. and **Wilson, W.A.**: Heterogeneity in presynaptic regulation of GABA release from

hippocampal inhibitory neurons. Neuron, 11:1057-1067, 1993.

Lambert, N.A. and **Wilson, W.A.**: Temporally distinct mechanisms of use-dependent depression at inhibitory synapses in the rat hippocampus. J. Neurophysiol., 72:121-130, 1994.

Swartzwelder, H.S., **Wilson, W.A.** and Tayyeb, M.I. Differential sensitivity of NMDA receptor-mediated synaptic potentials to ethanol in immature vs. mature hippocampus. Alcoholism: Clin. & Exp. Res., 19:320-323, 1995.

Barr, D.S., Lambert, N.A., Moore, S.D. and **Wilson, W.A.**: Induction and reversal of long-term potentiation by the same pattern of afferent activation. J. Neurosci., 15:5402-5410, 1995.

Swartzwelder, H.S., **Wilson, W.A.**, and Tayyeb, M.I. Age-dependent inhibition of long-term potentiation by ethanol in immature versus mature hippocampus. Alcoholism: Clin. & Exp. Res., 19(6):1480-1485, 1995

Burack, M.A., Stasheff, S.F. and **Wilson, W.A.**: Selective suppression of in vitro electrographic seizures by low-dose tetrodotoxin: A novel anticonvulsant effect. Epilepsy Res., 22(2):115-126, 1995.

Lambert, N.A. and **Wilson, W.A.**: High-threshold  $Ca^{2+}$  currents in rat hippocampal interneurons and their selective inhibition by activation of GABA<sub>B</sub> receptors. J. Physiology, 492.1:115-127, 1996.

Little, P.J., Kuhn, C.M., **Wilson, W.A.** and Swartzwelder, H.S.: Differential effects of ethanol in adolescent and adult rats. Alcoholism: Clin. and Exp. Res., 20(8):1346-1351, 1996.

Brucato, F.H., Levin, E.D., Mott, D.D., Lewis, D.V., Wilson, W.A. and Swartzwelder, H.S.: Hippocampal long-term potentiation and spatial learning in the rat: Effects of GABA<sub>B</sub> receptor blockade. Neurosci. 74:331-339, 1996.

Barr, D.S., Hoyt, K.L., Moore, S.D. and **Wilson, W.A.**: Post-ictal depression prevents induction of LTP in area CA1 of the rat hippocampal slice. Epilepsy Research, 27:111-118, 1997.

Markwiese. B., Acheson, S., Levin, E., **Wilson, W.A.**, and Swartzwelder, H.S.: Differential effects of ethanol on memory in adolescent and adult rats. Alcoholism: Clin. Exp. Res., 22(2):416-421, 1998

Swartzwelder, H.S., R.C. Richardson, B. Markwiese-Foerch, **W.A. Wilson** and P.J. Little: Developmental differences in the acquisition of tolerance to ethanol, Alcohol. 15(4):311-314, 1998.

Calton, J.L., **Wilson, W.A.** and Moore, S.D. Magnesium-dependent inhibition by N-Methyl-D-Aspartate receptor-mediated synaptic transmission by ethanol. JPET, 287(3):1015-1019, 1998.

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### **Books:**

*Buzzed: The Straight Facts About the Most Used and Abused Drugs from Alcohol to Ecstasy*, edited by Kuhn, C.M., Swartzwelder, H.S. and **Wilson, W.A.**, (W. W. Norton, 1998, 2003, 2008, 2014, 2019). English, Italian, Spanish (Portuguese market in Spanish), and Chinese (2015).

*Jasper's Basic Mechanisms of the Epilepsies, Third Edition*, edited by Delgado-Escueta, A.V., **Wilson, W.A.**, Olsen, R.W. and Porter, R.J. , (Lippincott, Williams and Wilkins, 1999).

*Pumped: Straight Facts for Athletes About Drugs, Supplements and Training* edited by Kuhn, C.M., Swartzwelder, H.S. and **Wilson, W.A.**, (W.W. Norton, 2000).

*Just Say Know: Talking with kids about drugs and alcohol*, Kuhn, C.M., Swartzwelder, H.S. and **Wilson, W.A.**, (W. W. Norton, 2002)

## Neuroscience and Education

**Director, DukeLEARN (Linking Education and Research in Neuroscience)**  
[www.duklearn.com](http://www.duklearn.com)

**Member, Center for Child and Family Policy, Duke University**

**Consultation service (selected) regarding drug education policy:**

Partnership for a Drug Free America  
Robert Wood Johnson Foundation  
National Academy of Sciences–Institute of Medicine  
Drug Strategies  
North Carolina Advisory Committee for Drug Treatment Courts (member)  
The Charles Dana Foundation

**Consultations and appearances for the media:**

### **Television (selected)**

CBS 60 Minutes II (appearance)  
Fox Television Network–Fox Files (appearance)  
ABC News (appearance)  
Local Raleigh-Durham Television–NBC, ABC, FOX (appearance)  
Oprah (consultation)  
Arnold Shapiro Productions–Teen Files (consultation)  
Public Broadcasting system–Frontline (consultation)  
ABC–20-20 (consultation)  
ABC News Now  
CBS San Francisco  
Daytime (syndicated)

### **Radio (selected)**

National Public Radio–Frank Stacio, Peoples Pharmacy  
ABC Radio-multiple spots  
CBS Radio–Mary Matalin and others  
Over 100 national and local broadcasts

### **Print: Major articles**

Seattle Post-Intelligencer–major feature republished nationally  
Raleigh News and Observer–major feature republished nationally

Book Reviews in The Economist, German and British news media, U.S. news media, and multiple professional publications

**Internet**

Multiple interviews on web sites–Celebrity Café, Amazon.com,  
Column for Parenting Today’s Teen  
([www.parentingteens.com](http://www.parentingteens.com))

Column for Salon Online Magazine “Dear Buzzed” ([www.salon.com](http://www.salon.com))

**Selected Public Speaking Appearances--1998-2019**

**Public Education agencies**

United States Department of Education–Drug Abuse Prevention in Higher Education

Georgia State PTA

North Carolina State PTA

North Carolina State Department of Education

Rye, NY Board of Education

Chapel Hill, NC Public Schools

Durham, NC Public Schools

MADD National Youth Conference

Communities of Concern

Association of Health Journalists

Duval County, FL Public Schools

National Highway Traffic Safety Administration (VT, MA, AL)

North Carolina Youth Summit

Action for Children

American Academy of Pediatrics (Bay Area)

Communities in Schools of North Carolina

South Carolina Annual Drugs of Abuse Conference

Lifesavers National Conference

**Drug Education and Treatment Professionals**

United States Department of Education

Florida Alcohol and Drug Abuse Association

North Carolina School Health Professionals

North Carolina Nurses Association

Student Assistance Services, Westchester County, NY

University of Nevada Reno

Eastern AHEC for North Carolina

Wisconsin Impaired Driving Institute

Alabama Governor's Conference on Underage Drinking  
Alabama Parole Officers  
Alabama Mental Health Association  
American Academy of Pediatrics (Bay Area)  
School of Nursing, Georgetown University  
New Canaan Community Coalition

### **UNC School of Government through 2018**

Multiple appearances to present Training for Judges, Lawyers and Court Administrators about the brain, effects of drugs, and unique brain development and drug issues in adolescence

### **American Academy of Forensic Psychologists 2019**

Invited lecture for 2019 meeting of the Academy to teach forensic neuropharmacology as part of their continuing education series.

### **Representative list of schools**

Charlotte Country Day, Charlotte NC  
Forsythe Country Day, Winston Salem NC  
Ardsley High School, Ardsley NY  
Rye High School, Rye NY  
St. Ignatius College Preparatory Academy, San Francisco  
University School of Milwaukee, Milwaukee, WI  
Kincaid School, Houston, TX  
Branson School, San Francisco  
Friends School, Wilmington, DE  
Sanderson High School, Raleigh, NC  
Avon Old Farms School, Avon, CT  
Sanderson High School, Raleigh  
Cary Academy, Cary  
Durham Academy, Durham  
Wakefield High School, Raleigh

### **Brief Bio:**

**Dr. Wilkie Wilson is a Research Professor of Prevention Science at Duke University,**

**an Emeritus Senior Research Scientist for the Department of Veterans Affairs, and the Director of the DukeLEARN Program at Duke. DukeLEARN is a newly approved Duke program to educate our society, especially our children about the brain—how to use it effectively and how to keep it healthy. As a laboratory scientist, Dr. Wilson is a neuropharmacologist who studies the ways in which drugs interact with the central nervous system, with a particular interest in how the brain acquires and stores information. An author of numerous scientific publications, book chapters and books, he has served as the supervisor of a number of young scientists: 12 young scientists as they obtained the Ph.D. or M.D./Ph.D. and more than 20 postdoctoral fellows. He is co-author of three books for the general public. Buzzed: The Straight Facts About The Most Used and Abused Drugs From Alcohol to Ecstasy, Pumped: Straight facts for athletes about drugs, supplements and training, and Just Say Know: Talking with kids about drugs and alcohol. For the past ten years, Dr. Wilson has worked to make brain science accessible to young people and adults in a variety of venues. He is a frequent speaker at schools for young people and parent groups. He provides continuing education for educators, counselors, and members of the criminal justice community. He also advocates for brain health through numerous media appearances on network and cable television as well as on numerous radio programs. Most recently he and colleagues have formed Cranial, a North Carolina nonprofit to produce a brain-oriented health education program that can replace the current mandatory Healthful Living curriculum in North Carolina high schools.**