

May 2011

CURRICULUM VITAE

NAME: M. Neal Waxham

PRESENT TITLE: Professor
Department of Neurobiology and Anatomy
The University of Texas Medical School at Houston
P.O. Box 20708, Houston, Texas 77225

CITIZENSHIP: U.S.A.

UNDERGRADUATE EDUCATION:

1974-1978	Pennsylvania State University, B.S. State College, Pennsylvania	1978	-Microbiology
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GRADUATE EDUCATION:

1980-1984	The Johns Hopkins University, Ph.D. Baltimore, Maryland	1984	-Immunology and Infectious Disease
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POSTGRADUATE TRAINING:

1983-1984	Research Associate, Department of Neurology The University of Texas Medical School at Houston Dr. Jerry Wolinsky and Dr. Alfred Server
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ACADEMIC APPOINTMENTS:

1984-1985	Instructor, Department of Neurology The University of Texas Medical School at Houston
1985-1986	Research Assistant Professor, Department of Neurology, The University of Texas Medical School at Houston
1986-1990	Assistant Professor, Department of Neurology, The University of Texas Medical School at Houston
1990-1993	Assistant Professor, Department of Neurobiology and Anatomy, The University of Texas Medical School at Houston
1993-2001	Associate Professor (tenured), Department of Neurobiology and Anatomy, The University of Texas Medical School at Houston
2001-present	Professor (tenured), Department of Neurobiology and Anatomy, The University of Texas Medical School at Houston
2007-present	The William Wheless, III Endowed Professorship in Biomedical Sciences, UT- Houston Medical School, Houston, TX

2002-2006	Neuroscience Program Director, the Graduate School of Biomedical Sciences, The University of Texas Health Science Center at Houston
1988-present	Faculty Member of the Graduate School of Biomedical Sciences, The University of Texas Health Science Center at Houston
2009-present	Adjunct Professor of Physics, College of Natural Sciences and Mathematics, University of Houston, Houston, TX

PROFESSIONAL ORGANIZATIONS:

1984-present	American Association for the Advancement of Science
1987-present	Society for Neuroscience
1998-present	American Society for Cell Biology
2003-present	Biophysical Society

HONORS AND AWARDS:

1991-1996	Research Career Development Award, NINDS, NIH
1997, 2000, 2004	Dean's Excellence Award
1997	John P. McGovern Award for Outstanding Teaching

EDITORIAL POSITIONS:

Ad hoc reviewer for:	Journal of Neurochemistry Journal of Neuroscience European Journal for Neuroscience Journal of Biological Chemistry Proceedings of the National Academy of Science Cell and Molecular Life Sciences pLOS Biology
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SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

2002	Ad Hoc Reviewer ZMH1 Study Section, NIH
2002-2005	Ad Hoc Reviewer ZDA1 Study Section, NIH
2008	Internal Review, NICHD, Section on Development Neurobiology
2008	Ad Hoc Reviewer CRCNS study section, NSF
2009-2011	Reviewer NIH F04B Study Section

SERVICE ON UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON COMMITTEES:

1. Admissions Committee, Interviewer, 1987-2004
2. Admissions Committee Medical School, Full Member, 1989-1992
3. Committee to Evaluate the Analytical Chemistry Center, 1990, 1992
4. Faculty-Student Relations Committee, 1988-1991
5. M.D./Ph.D. Committee, 1991-1996
6. Biohazards Committee, 1993-1996
7. Student Evaluations and Promotions Committee, 1996-2000
8. Committee on Committees, 1994-1995
9. Admission Committee, GSBS, 1996-1998
10. Chemical Safety Committee, 1996-2005
11. Steering Committee for the Genomics/Proteomics Core Laboratories, 2000-2004

12. Faculty Appointments, Promotion and Tenure Committee 2002-2005

SERVICE ON UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER COMMITTEES

1. Conflict of Interest Committee, 2000-present, Chair 2010-present
2. Institutional Conflict of Interest Committee, 2010-present

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

1. Sara Westgate 1986-1993; Currently Practicing Neurologist, Austin, Texas
2. William McVaugh 1990-1994; Currently Professor (tenured), Malone College, Canton OH
3. James Costantin 1990-1994; Currently Senior Research Scientist, Molecular Dynamics, Mountainview, CA
4. Andy Hudmon 1992-1997; Currently, Asst. Prof., Univ. of Indiana, Sch. of Med. Indianapolis, IN
5. Steve Kolb 1992-1998; Currently Asst. Prof. in Neurology, Ohio State Univ. Medical Center Columbus, OH
6. Sally Kim 1997-2005; Currently a post-doctoral fellow in Neuroscience, Cal Tech, Pasadena, CA
7. Tara Ginsberg 1998-2004; Currently a post-doctoral fellow in Neuroscience, University of British Columbia
8. Vijay Iyer 2002-2006; Currently a post-doctoral fellow, Janelia Farms HHMI, Janelia Farms, VA
9. Aron (Ben) Goins 2006-2008; M.S., GSBS
10. Matt Swulius 2005-2010; Ph.D.; Currently a post-doctoral fellow, Cal Tech Univ.

SPONSORSHIP OF POSTDOCTORAL FELLOWS

1. Jarek Aronowski 1991-1994, Currently Research Associate Professor of Neurology, UTHSC at Houston, Houston, TX
2. Martin Fluck 1996-1999, Co-advisor with Frank Booth, Currently Assistant Professor, University of Bern, Bern
3. Yoshi Kubota 2003-2005, Currently Res. Scientist, Neurobiology and Anatomy, UTHSC at Houston. Houston, TX
4. Hugo Sanabria 2005-2010, Currently Post-doctoral Fellow in Claus Seidel's lab, Max Planck Institute, Dusseldorf, Germany

CURRENT TEACHING RESPONSIBILITIES:

1. Lecturer, Neuroscience Course
2. Lecturer, Cellular Neurobiology-Molecular and Developmental.
3. Lecturer, Current Topics in Neuroscience
4. Lecturer, Current Methods in Molecular Research

CURRENT GRANT SUPPORT:

1. a. Title: Structure and Function of Calmodulin-dependent Protein Kinase
b. P.I.: Dr. M. Neal Waxham

- c. Agency: NIH, NINDS
 - d. Duration: 09-01-08 to 08-30-09
 - e. Percent Effort: 30
 - f. Total Project Direct Cost: \$254,000
- 2.
- a. Title: Neural Models of Plasticity: Molecules to Networks
 - b. P.I. John Byrne
 - c. Agency: NIH, NINDS
 - d. Duration: 2005-2010
 - e. Percent Effort: 20
 - f. Total Project Direct Cost: \$4,900,000

PAST GRANT SUPPORT:

- 1.
- a Title: Molecular Mechanism of Adrenergic Plasticity
 - b. P.I.: Gale Craviso
 - c. Agency: NIH, NINDS NS27550
 - d. Duration 1989-1992
 - e. Percent Effort: 5
 - f. 1992 Project Cost: \$142,719
- 2.
- a: Title: HN Glycoprotein Role in Mumps Virus Neurovirulence
 - b. P.I.: Neal Waxham
 - c. Agency: NIH, NINCDS
 - d. Duration: 1986-1989
 - e. Percent Effort: 80
 - f. Total Project Cost: \$301,528
- 3.
- a. Title: Role of Synthetic Peptides in Treatment of Paramyxovirus Infections
 - b. P.I.: Neal Waxham
 - c. Agency: General Hoeschst Corporation
 - d. Duration: 1985-1986.
 - e. Percent Effort: 10
- 4.
- a. Title: The Role of the HN Glycoprotein in Determining Mumps Virus Neurovirulence
 - b. P.I.: Neal Waxham
 - c. Agency: NIH Biomedical Research Support Grant
 - d. Duration: 1985-1986
 - e. Percent Effort: 70
 - f. Total Project Cost: \$7,525
- 5.
- a. Title: Functional Topography of Rubella Virions
 - b. P.I.: Neal Waxham
 - c. Agency: NIH Biomedical Research Support Grant
 - d. Duration: 1984-1985
 - e. Percent Effort: 20
 - f. Total Project Cost: \$6,381
- 6.
- a. Title: Calcium Blocker and Related Therapy for Stroke
 - b. P.I. Dr. Jim Grotta
 - c. Agency: NIH, NINDS
 - d. Duration: 04-01-91 to 03-30-94
 - e. Percent Effort: 20

- f. Total Project Cost: \$893,360
7. a. Title: Regulation of Adrenergic Metabolism
b. P.I.: Dr. Jack Waymire
c. Agency: NIH, NINDS
d. Duration: 12-1-90 to 11-30-94
e. Percent Effort: 5
f. Total Project Cost: \$487,921
8. a. Title: CaM-kinase Autoregulation and Role in Synaptic Function
b. P.I.: Dr. M. Neal Waxham
c. Agency: NIH, NINDS, Research Career Development Award
d. Duration: 09-01-91 to 08-30-96
e. Percent Effort: 80
f. Total Project Cost: \$343,170
9. a. Title: Isolation of an Immune Regulatory CNS Glycoprotein
b. P.I. Dr. John W. Lindsey
c. Agency: National Multiple Sclerosis Society
d. Duration: 04/01/01-03/31/03
e. Percent Effort: 5
f. Total Project Cost: \$255,736
10. a. Title: Calmodulin Dynamics in Neurons
b. P.I. Sally Kim, National Research Service Award
c. Agency: National Institute of Mental Health
d. Duration: 06/01/01-05/31/04
e. Percent Effort: no specific percent effort
f. Total Project Cost: \$77,000
11. a. Title: Adaptation of a multi-photon microscope to study intracellular diffusion
b. P.I.: Dr. Neal Waxham
c. Agency: Texas Higher Education Board; ARP
d. Duration: 2002-2004
e. Percent Effort: 20
f. Total Project Cost: \$140,000
12. a. Title: Synaptic Signaling at the Single Molecule Level
b. P.I.: Dr. Neal Waxham
c. Agency: Human Frontiers in Science Program
d. Duration: 2002-2005
e. Percent Effort: 20
f. Total Project Direct Cost: \$750,000
13. a. Title: Training Grant in Neural Plasticity
b. P.I.: Dr. Neal Waxham
c. Agency: NIH, NINDS
d. Duration: 2001-2005
e. Percent Effort: 10
f. Total Project Cost: \$1,129,437
14. a. Title: Application of Fluorescence Correlation Spectroscopy to Understand Intracellular Diffusion
b. P.I.: Dr. Neal Waxham; Student Aaron Goins
c. Agency: Subcontract through Baylor for training grant position; NIH/GM
d. Duration: 2006-2008
e. Percent Effort: none specified

- f. Total Project Cost: \$24,389
15. a. Title: Nanoscale Dynamics of Proteins in Crowded Solution
b. P.I.: Dr. Neal Waxham; Post-doctoral Fellowship Hugo Sanabria
c. Agency: Subcontract through University of Houston for training grant position: NIH/GM
d. Duration: 2007-2008
e. Percent Effort: none specified
f. Total Project Cost: \$38, 796
16. a. Title: Structure and Function of Calmodulin-dependent Protein Kinase
b. P.I.: Dr. M. Neal Waxham
c. Agency: NIH, NINDS
d. Duration: 07-01-03 to 09-30-08
e. Percent Effort: 30
f. Total Project Direct Cost: \$1,402,000
17. a. Title: Molecular Memory Mechanisms
b. P.I. John Lisman
c. Agency: NIH
d. Duration: 2004-2008
e. Percent Effort: 8
f. Total Project Direct Cost: \$1,000,000
18. a. Title: Calcium-dependent Protein Regulation
b. P.I. John Putkey
c. Agency: NIH, NIGMS
d. Duration: 2005-2009
e. Percent Effort: 7.5
f. Total Project Direct Cost: \$760,000
19. a. Title: Training Grant in Neuroscience
b. P.I.: Dr. Neal Waxham
c. Agency: NIH, NIMH
d. Duration: 2003-2008
e. Percent Effort: 10
f. Total Project Cost: \$929,437

INVITED TALKS AND PRESENTATIONS

1990 - Department of Molecular Genetics, Harvard Medical School, Boston MA
1990 - Department of Neuroscience, Brown University, Providence RI
1992 - Symposium on Cell Signaling, Port Arthur NSW Australia
1994 - Neurology Grand Rounds, U.T. Medical School at Houston, Houston TX
1994 - Cerebral Ischemia and Basic Mechanisms, Bad Schaadten Germany
1996 - Department of Integrative Biology, U.T. Medical School at Houston, Houston TX
1997 - Department of Molecular Pharmacology, U. of Cincinnati Medical School, Cincinnati OH
1997 - Neurology Grand Rounds, U.T. Medical School at Houston, Houston TX
1998 - Dept. of Pathology and Lab Medicine, U.T. Medical School at Houston, Houston TX
2000 - Dept. of Integrative Biology, U.T. Medical School at Houston, Houston TX
2000 - Banbury Conference on the Biology of CaM-kinase II, CSH Laboratories, CSH NY
2000 - Dept. of Neuroscience, Baylor College of Medicine, Houston TX
2001 - Dept. of Neurobiology, Stanford University, Stanford, CA.
2002- Department of Neuroscience, Brandeis University, Waltham MA

2003- MARCS Program Invited Lecture, Delaware State University, DE
2004- Volen Institute for Learning and Memory, Brandeis University, Waltham, MA
2005- Volen Institute for Learning and Memory, Brandeis University, Waltham, MA
2005- Department of Pharmacology, Texas A&M University, College Station, TX
2006- Department of Integrative Biology, U.T. Medical School at Houston, Houston, TX
2006- Department of Molecular Biosciences, Kansas State University, Lawrence, KA
2006- Houston Area Molecular Biophysics/KECK seminar, Rice University, Houston, TX
2006- Department of Pharmacology, Columbia University, New York, NY
2008- Department of Biochemistry, Baylor College of Medicine, Houston, TX
2008- Biophysical Discussion-Calmodulin Modulation of Ion Channels, Asilomar, CA
2008- Department of Mol. Phys. and Biophysics, Baylor College of Medicine, Houston, TX
2009- Department of Physics, University of Houston, Houston, TX
2009- Stark Institute of Neuroscience, Indiana University, Indianapolis, IN
2010- Department of Biophysics and Molecular Physiology, Vanderbilt University, Knoxville, TN

PUBLICATIONS:

A. Abstracts

1. Wolinsky, J.S., **Waxham, M.N.**, and Server, A.C. (1985). Protective effects of glycoprotein-specific monoclonal antibodies on the course of experimental mumps virus meningoencephalitis. *Neurology* 35(2):281
2. Wolinsky, J.S., and **Waxham, M.N.** (1985). Detailed immunologic analysis of the structural polypeptides of rubella virus. *Neurology* 35(2):282.
3. Server, A.C., Smith, J.A., **Waxham, M.N.**, Wolinsky, J.S., and Goodman, H.M. (1985). Comparison of the F1 NH₂-terminal region of a fusing and nonfusing strain of mumps virus. *Virus Research* 1S:72.
4. Burgin, K., **Waxham, M.N.** and Kelly, P.T. (1988). In situ hybridization analyses of Ca⁺⁺/calmodulin-dependent protein kinase II in developing rat brain. *Soc. Neurosci. Abstr.* 14: 1162.
5. Kelly, P., Weinberger, R. and **Waxham, M.N.** (1988). Active-site-directed inhibition of Ca⁺⁺/CaM-dependent kinase II (CK-II) by a bifunctional calmodulin-binding peptide. *Soc. Neurosci. Abstr.* 14: 622.
6. Weinberger, R., Aronowski, J., **Waxham, M.N.** and Kelly, P. (1988). A polyclonal antibody that specifically recognizes the calmodulin (CaM) binding domain of Ca⁺⁺/CaM-dependent protein kinase II (CK-II). *Soc. Neurosci. Abstr.* 14: 107.
7. Mauk, M.D., Kelly, P.T., Cormier, R.J., and **Waxham, M.N.** (1989). Calmodulin antagonists modulate synaptic activation of hippocampal pyramidal cells. *Soc. Neurosci. Abstr.* 15: 194.
8. Aronowski, J., Kelly, P., and **Waxham, N.** (1989). Expression and characterization of the 50 kDa subunit of Ca²⁺/calmodulin-dependent protein kinase II (CK-II) in eucaryotic cells. *Soc. Neurosci. Abstr.* 15: 1268.
9. Kelly, P., Honeycutt, T., Weinberger, R., Blumenthal, D., Yip, R., and **Waxham, N.** (1989). Functional analysis of the calmodulin (CaM)-binding domain of CaM-kinase II (CK-II) using synthetic peptides and site-directed mutagenesis. *Soc. Neurosci. Abstr.* 15: 958.
10. Westgate, S.A., Kelly, P.T., and **Waxham, M.N.** (1989). Does mutagenesis of Asp-135 in Ca²⁺/calmodulin-dependent protein kinase II (CK-II) alter substrate binding? *Soc. Neurosci. Abstr.* 15:681.
11. Perkel, D., Malenka, R., Kauer, J., Mauk, M., Kelly, P., Nicoll, R., and **Waxham, N.** (1989). Long-term potentiation: An essential role for postsynaptic calmodulin and protein kinase activity. *Soc. Neurosci. Abstr.* 15: 166.
12. Crow, T., Forrester, J., **Waxham, N.**, and Neary, J. (1989). Effect of down regulation of protein kinase C on short-term enhancement of generator potentials in *Hermissenda* produced by light and 5-HT. *Soc. Neurosci. Abstr.* 15: 1284.
13. DeGraba, T.J., Aronowski, J., **Waxham, N.**, and Grotta, J. (1991). Ca⁺⁺ influx and CaM-kinase II activity as predictor of neuronal damage. *J. Cereb. Blood Flow Metab.* 11(suppl. 2), S521.
14. Aronowski, J., Grotta, J.C., and **Waxham, M.N.** (1991). Translocation of Ca²⁺/calmodulin-dependent protein kinase II (CaM-KII) after forebrain ischemia. *Soc. Neurosci. Abstr.* 17: 1087.
15. Hanson, S.K., Grotta, J.C., **Waxham, M.N.**, Earls, R., Strong, R., and Dafny, N. (1992). Regional depression in calcium/calmodulin dependent protein kinase II (CaM-KII) in focal ischemia. *Soc. Neurosci. Abstr.* 18: 1589.

16. Costantin, J.L., Mauk, M.D., and **Waxham, M.N.** (1992). Protein kinase inhibitors block the phorbol ester induced increase in calcium currents expressed by rat brain RNA in *Xenopus* oocytes. *Soc. Neurosci. Abstr.* 18: 431.
17. McVaugh, W.M. and **Waxham, M.N.** (1992). Augmentation of NMDA currents by cAMP and forskolin. *Soc. Neurosci. Abstr.* 18: 651.
18. Aronowski, J., Grotta, J.C., and **Waxham, N.** (1992). Block of Ca^{2+} influx during ischemia inhibits down regulation of Ca^{2+} /calmodulin-dependent protein kinase II and protein kinase C. *Soc. Neurosci. Abstr.* 18: 1589.
19. Hanson, S., Grotta, J., and **Waxham, N.** (1993) CaM-kinase II in focal ischemia with reperfusion. *Ann. Neurol.* 34, 287.
20. Costantin, J.L., Neely, A., Baldelli, P., Wei, X., **Waxham, N.**, Birnbaumer, L. and Stefani, E. (1994) Regulation of cardiac calcium channel clones by protein kinase A. *Biophys. J.* 66, 231.
21. Lin, X., Dotson, D.G., Hudmon, A., **Waxham, M.N.**, and Putkey, J.A. (1995) Specific blocking of the N-terminal hydrophobic regions in cTnC and CaM inhibits activation of myofibril ATPase activity. *Biophys. J.* 68, A365
22. Hudmon, A., **Waxham, M.N.**, Kolb, S.J., Ehses, W., Klueppelberg, U., Kolodziej, S.J., Schroeter, J.P., and Stoops, J.K. (1995) Stain cryo-electron microscopy and image analysis of alpha- Ca^{2+} /calmodulin-dependent protein kinase II. 9th International Conf. Sec. Mssgrs. and Phosphoproteins, 145.
23. **Waxham, M.N.**, Hudmon, A., Grotta, J.C., Aronowski, J., Westgate, S.A., Silva, A., Neve, R., and Kolb, S.J. (1995) Ca^{2+} /calmodulin-dependent protein kinase type II (CaM-kinase) plays an essential role in determining survival in models of neuronal injury. 9th International Conf. Sec. Mssgrs. and Phosphoproteins, 145.
24. Kim, S.A., Hudmon, A. and **Waxham, M.N.** (1998) A novel mechanism to reverse the phosphorylation of Ca^{2+} /calmodulin-dependent protein kinase II: Autodephosphorylation. *Soc. Neurosci. Abstr.* 24, 862.
25. Kim, S.A., Zipfel, W., Schwille, P., Webb, W.W. and **Waxham, M.N.** (1999) Assessing local diffusion of calmodulin in neurons using multiphoton fluorescence photobleaching recovery (MPFPR) and fluorescence correlation spectroscopy (MPFCS). *Mol. Biol. Cell* 10, 333a.
26. Ginsberg, T.R., Neve, R.L., and **Waxham, M.N.** (1999) GAP-43 influences the dynamics of CaM kinase II activation through competition for calmodulin binding. *Mol. Biol. Cell* 10, 334a.
27. Zipfel, W.R., Kim, S.A., **Waxham, M.N.**, and Webb, W.W. (2000) Local diffusion of calmodulin in neurons measured using multiphoton fluorescence photobleaching recovery (MPFPR) and fluorescence correlation spectroscopy (MPFCS). *Biophys. J.* 78, 392A.
28. Zhang, Y., **Waxham, M.N.**, Tsai, A.L. and Putkey, J.A. (2000) A kinetic model for differential target activation by calmodulin. *Biophys. J.* 78, 71A.
29. **Waxham, M.N.**, Kolodziej, S.J., Hudmon, A., Liao, W. and Stoops, J.K. (2000) Three-dimensional structures of CaM-kinase II isoforms. *Soc. Neurosci. Abstr.* 26.
30. Ginsberg TR, Putkey J, **Waxham M.N.** (2000). RC3 (Neurogranin) regulates the availability of calmodulin in dendrites. *Soc. Neurosci. Abst.* 30.
31. Zipfel, W.R., Kim, S.A., **Waxham, M.N.** and Webb, W.W. (2001) Techniques for quantification of molecular mobility in cells illustrated by measurements of calmodulin diffusion in neurons. *Biophys. J.* 80, 615A.
32. Kim, S.A., Heinze, K.G., **Waxham, M.N.**, and Schwille, P. (2002). Assessing intracellular calmodulin dynamics using fluorescence spectroscopy techniques. The 6th International Carl Zeiss Workshop on Fluorescence Correlation Spectroscopy and Related Methods.
33. Kim, S.A., Heinze, K.G., **Waxham, M.N.**, and Schwille, P. (2002). Intracellular measurements of calmodulin and CaMKII interactions using multiphoton fluorescence cross-correlation spectroscopy (MPFCCS). *Biophys. J.* 82: 44a.
34. Kurlach, J., Kwok, L., Kim, S.A., **Waxham, M.N.**, and Webb, W.W., Pollack, L. (2002). Measurements of rapid conformational changes of proteins in a fast laminar flow mixing device. *Biophys. J.* 82:25a.
35. Heinze, K.G., Kim, S.A., **Waxham, M.N.**, and Schwille, P. (2002). Two-Photon Cross-Correlation Spectroscopy (TPCCS) in Living Cells. 37th Winter Seminar in Biophysical Chemistry, Molecular Biology and Cybernetics of Cell Functions.
36. Gaertner TR, Putkey JA, **Waxham M.N.** (2002). Kinetics of calmodulin binding to RC3/neurogranin. *Soc. Neurosci. Abst.* 32.
37. Kim, S.A., Zipfel, W.R., Schwille, P., Webb, W.W., and **Waxham, M.N.** (2003). Calmodulin availability in neuronal compartments. *Soc. Neurosci. Abstr.*

38. Kim, S.A., Heinze, K.G., **Waxham, M.N.**, and Schwille, P. (2003). Deciphering calmodulin and CaM-kinase II binding dynamics by two-photon cross-correlation spectroscopy. *Biophys. J.*
39. Putkey, J.A., **Waxham, M.N.** and Kleerekoper, Q. (2003) A novel role for IQ motif calmodulin binding proteins. Biophysical Society.
40. Junge, H.J., Betz, A., Rhee, J.-S., Jahn, O., Masnour, M., Varoqueaux, F., Spiess, J., **Waxham, M.N.**, Rosenmund, C., and Brose, N. (2004) A calmodulin/munc-13 complex mediates short-term changes in synaptic efficacy. *Synaptic transmission: From ion channels to neuronal network function*. Gottingen, DE.
41. Iyer, V., Rossow, M.J., Saggau, P., and **Waxham, M.N.** (2004) Characterization and optimization of multiphoton excitation (MPE) instrumentation using fluorescence correlation spectroscopy. *Biophys. J.* 86: 607A.
42. Putkey, J.A., **Waxham, M.N.**, Gaertner, T., Kleerekoper, Q. (2004) A new role for IQ motif proteins in regulating calmodulin function. *Biophys. J.* 86:510A.
43. Kubota, Y., Kalantzis, G., Putkey, J.A., Shouval, H. and **Waxham, M.N.** (2005) Coarse bifurcation analysis and model reduction of the computer simulation of the postsynaptic CaMKII signaling system. *Biophys. J.* 88:625a.
44. Heinze, K.G., Kim, S.A., Bacia, K., **Waxham, M.N.** and Schwille, P. (2005) Quantifying molecular binding dynamics with variable stoichiometry in live cells using two-photon cross-correlation analysis. *Biophys. J.* 88:525A.
45. Putkey, J.A., **Waxham, M.N.**, Gaertner, T. and Kleerekoper, Q. (2006) Unstructured regulators of calmodulin signaling. Biophysical Society Meeting, Salt Lake City.
46. Sanabria H. Iyer, V., Kubota, Y. and **Waxham, M.N.** (2006) Single-Molecule Diffusion Studies Using Fluorescence Correlation Spectroscopy in Nanostructures. Biophysical Society Meeting, Salt Lake City.
47. Sanabria, H. and **Waxham, M.N.** (2007) Probe Diffusion in Solutions of Actin and Crowding Agents. 2007 Biophysical Society Meeting Abstracts. Biophysical Society Meeting, Baltimore, MD
48. Goins, A.B., Sanabria, H. and **Waxham, M.N.** (2007) Relative Size Dependent Effects of Molecular Crowding on Translational Mobility. Biophysical Society Meeting, Baltimore, MD
49. Park, H.Y., Kim, S.A., Korch, J., Rhoades, E., Kwok, L.W., Zipfel, W.R., **Waxham, M.N.**, Webb, W.W., and Pollack, L. (2007) Microsecond Kinetics of Protein Conformational Changes Studied with a Microfluidic Mixer. Biophysical Society Meeting, Baltimore, MD.
50. Forest, A., Swilius, M., Bradshaw, M., and **Waxham, M.N.** (2007) Role of the N- and C-terminal Lobes of Calmodulin in the Activation of Ca²⁺/calmodulin-dependent protein kinase II. Annual Meeting of the Society of Neuroscience, San Diego, CA.
51. Goins, A.B., Sanabria, H. and **Waxham, M.N.** (2008) Protein Mobility in Crowded Dextran Mixtures. Biophysical Society Meeting, Long Beach, CA.
52. Sanabria, H., Digman, M., Gratton, E., and **Waxham, M.N.** (2008) Limiting Calmodulin Revealed by Image Correlation Spectroscopy. Biophysical Society Meeting, Long Beach, CA.
53. Kubota, Y., Byrne, M., and **Waxham, M.N.** (2008) Results from a Novel Molecular Dynamics Simulator Reveal a Quantitative Mechanism for NMDA Receptor-Dependent CaMKII Translocation in Synaptic Spines. Biophysical Society Meeting, Long Beach, CA.
54. Byrne, M., Baxter, D., **Waxham, M.N.**, and Kubota, Y. (2008) Annual Meeting of the Society of Neuroscience, Washington, DC
55. Sanabria, H., Kolodziej S.J., Swilius M.T., Liu J., **Waxham M.N.** (2009) β CaMKII Regulates Actin Assembly and Structure, Biophysical Society Meeting, Baltimore, MD.
56. Byrne, M.J., **Waxham, N.M.**, and Kubota, Y (2009). Effects of geometry on Ca²⁺/calmodulin-dependent protein kinase II diffusion into and recruitment by dendritic spines. Society for Neuroscience. Chicago, IL

B. Refereed Original Articles in Journals:

1. Server, A.C., Merz, D.C., **Waxham, M.N.**, and Wolinsky, J.S. (1982). Differentiation of mumps virus strains using monoclonal antibody to the HN glycoprotein. *Infect. Immun.* 35: 179-186.
2. Schwendemann, G., Wolinsky, J.S., Hatzidimitriou, G., Merz, D.C., and **Waxham, M.N.** (1982). Post-embedding immunocytochemical localization of paramyxovirus antigens by light and electron microscopy. *J. Histochem. Cytochem.* 30: 1313-1319.

3. Merz, D.C., Server, A.C., **Waxham, M.N.**, and Wolinsky, J.S. (1983). Biosynthesis of the mumps virus F glycoprotein: Nonfusing strains efficiently cleave the F glycoprotein precursor. *J. Gen. Virol.* 64: 1457-1467.
4. **Waxham, M.N.**, and Wolinsky, J.S. (1983). Immunocytochemical identification of rubella virus hemagglutinin. *Virology* 126: 194-203.
5. **Waxham, M. N.**, and Wolinsky, J.S. (1985). A model for the structural organization of rubella virions. *Rev. Inf. Dis.* 67: S133-S139.
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