

CURRICULUM VITAE - WILLIAM H. CHURCH

ADDRESS: Department of Chemistry
Trinity College
Hartford, CT
(860)297-2215

EDUCATION

	<u>Degree</u>	<u>Date Conferred</u>	<u>Field</u>
Emory University Atlanta, GA	Ph.D.	1/24/87	Analytical Chemistry
James Madison University Harrisonburg, VA	B.S.	5/9/81	Chemistry/ Psychology

PROFESSIONAL EXPERIENCE

1999-present Associate Professor, Chemistry Dept. and Neuroscience Program, Trinity College, Hartford, CT
2015-present Adjunct Assistant Professor, Neuroscience Department, University of Connecticut Health Center, School of Medicine.
2003-2006 Director of the Neuroscience Program, Trinity College, Hartford, CT
2001-2002 Visiting Research Scientist, Department of Neuroscience, University of Connecticut Health Center, Farmington CT
1995-1999 Assistant Professor, Chemistry Dept. and Neuroscience Program, Trinity College, Hartford, CT
1990 - 1995 Assistant Professor, Chemistry Dept., East Carolina University, Greenville, NC
1988 - 1990 Visiting Assistant Professor, Chemistry Dept., Trinity College, Hartford, CT
1987 - 1988 NIH Postdoctoral Research Fellow, Clayton Foundation for Peptide Biology Research, The Salk Institute for Biological Studies, La Jolla, CA
1982-1986 Research Assistant, Chemistry Department, Emory University, Atlanta, GA.
1982-1984 Teaching Assistant, Chemistry Department, Emory University, Atlanta, GA.

RESEARCH INTERESTS

The chemical basis of neurodegenerative diseases; development of analytical methods for neuroscience research. Bioanalytical chemistry emphasizing liquid chromatography, mass spectroscopy, and capillary electrophoresis.

PROFESSIONAL AFFILIATIONS

American Chemical Society, Society for Neuroscience, Sigma Xi, Council on Undergraduate Research, Faculty for Undergraduate Neuroscience

PROFESSIONAL APPOINTMENTS, AWARDS, AND HONORS

Council on Undergraduate Research Speakers Bureau 1995-96
Member of the Science Faculty Program Development Committee for the Trinity College/Connecticut Science Museum Consortium- 1995/96
Member of the American Chemical Society Council Committee on Public Relations, 1993-1999
Recipient of the ECU College of Arts and Sciences College Research Award, 1993
Recipient of the ECU Chemistry Dept. ACS Student Affiliates Most Outstanding Chemistry Professor, 1995
Listed in Who's Who of American Scientists and Engineers – 1996-99
Faculty for Undergraduate Neuroscience Faculty Award of Appreciation -1999, 2004.

PUBLICATIONS CO-AUTHORED WITH UNDERGRADUATES

1. Grant, T.A., Carroll, R.G., Church, W.H., Henry, A., Prasad, N.H., Adel-Rahman, A.A., and Allison, E.J., Jr., Environmental Temperature Variations Cause Degradations in Epinephrine Concentration and Biological Activity, *American Journal of Emergency Medicine* **12** (1994) 319-322.
2. Church, W.H., Hu, S.S., and Henry, A.J., Thermal Degradation of Injectable Epinephrine, *American Journal of Emergency Medicine* **12** (1994) 306-309.
3. Church, W.H., Lee, C.S., and Dranchak, K.M., Capillary Electrophoresis of Glutamate and Aspartate in Rat Brain Dialysate: Improvements in Detection and Analysis Time Using Cyclodextrins *J Chrom B, Biomed Appl* **700** (1997) 67-75
4. Church, W.H. and Rappolt, G. Nigrostriatal Catecholamine Metabolism is Altered by Purine Enzyme Inhibition, *Exp. Brain Res.* **127** (1999) 147-150.
5. McGovern, R.A. and Church W.H., The Role of N-methyl-D-aspartate Receptors in MPP⁺ Toxicity in Murine Cell Cultures, *J. Behav. Neurosci. Res.* **1** (2003), 13
6. Garritt, J.L. and Church W.H., Monomeric and Polymer β -cyclodextrins Impart Unique Separation Effects When Used As Buffer Modifiers in Capillary Zone Electrophoresis, *J. Undergrad. Chem. Res.* **1** (2007), 41-46.
7. Church, W.H., Adams, R.E and Wyss, L.S., Ketogenic diet alters dopaminergic activity in the mouse cortex, *Neurosci. Lett.* **571** (2014) 1-4.

underline denotes undergraduate author

OTHER PUBLICATIONS

1. Sabol, K.E., Neill, D.B., Wages, S.A., Church, W.H., and Justice, J.B., Jr., Dopamine Depletion in a Striatal Subregion Disrupts Performance of a Skilled Motor Task in the Rat. *Brain Research* **335** (1985) 33-43.
2. Wages, S.A., Church, W.H., and Justice, J.B., Jr., Sampling Considerations for On-line Microbore Liquid Chromatography of Brain Dialysate. *Analytical Chemistry* **58** (1986) 1649-1656.
3. Church, W.H., Sabol, K.E., Justice, J.B., Jr. and Neill, D.B., Striatal Dopamine Activity and Unilateral Barpressing in Rats. *Pharmacology, Biochemistry, and Behavior* **25** (1986) 865-871.
4. Church, W.H. and Justice, J.B., Jr., Rapid Determination of Extracellular Dopamine In Vivo, *Analytical Chemistry* **59** (1987) 712-716.
5. Church, W.H., Justice, J.B., Jr. and Neill, D.B., Detecting Behaviorally Relevant Changes in Extracellular Dopamine with Microdialysis. *Brain Research* **412** (1987) 397-399.
6. Church, W.H., Justice, J.B., Jr. and Byrd, L.D., Extracellular Dopamine in Rat Striatum Following Uptake Inhibition by Cocaine, Nomifensine, and Bzotroprine *European Journal of Pharmacology* **139** (1987) 345-348.
7. Church, W.H. and Justice, J.B., Jr., On-line Smallbore Chromatography for Neurochemical Analysis of the Brain, in Advances in Chromatography Vol. 28 J.R. Giddings, ed. (1989) 165-194.
8. Ward, V.L., McGinty, J.F., Church, W.H., Iron(III) Chloride Injection Increases Nigral Uric Acid in Guinea Pig. *NeuroReport* **4** (1993) 787-790.
9. Church, W.H. and Ward, V.L., Uric Acid is Reduced in the Substantia Nigra in Parkinson's Disease: Effect on Dopamine Oxidation. *Brain Research Bulletin* **33** (1994) 419-425.
10. Church, W.H. and Ward, V.L., Uric Acid is Reduced in the Substantia Nigra in Parkinson's Disease: Effect on Dopamine Oxidation. abstracted in *Parkinson/Alzheimer Digest*, December 1994.

11. Church, W.H. and Yung, T.F. Changes in Uric Acid During Acute Infusion of MPP⁺, 6-OHDA, and FeCl₃: A Microdialysis Study in the Substantia Nigra of the Guinea Pig, *Molecular and Chemical Neuropathology* **27** (1996) 131-144.
12. Church, W.H. and Chiang, Hui-Ti, Characterization and quantification of organic anions with capillary zone electrophoresis using direct and indirect detection, *Journal of Capillary Electrophoresis*, **4** (1997), 261-268.
13. Church, WH, Bronzino, JD, Kehoe, P and Hendriks, R, Monitoring amino acids in the hippocampus of awake behaving animals during LTP: Is it relevant to elucidating a mechanism for learning? In *Monitoring Molecules in Neuroscience*; Rollema, H., Abercrombie, E., Sulzer, D., Zackheim, J., Eds.; The State University of New Jersey: Newark, 1999
14. WH Church and SH Hewett, "The Relationship Between NMDA Receptor Expression and MPP⁺ Toxicity in Cultured Dopaminergic Cells", *J Neurosci Res* **73** (2003) 811-817.
15. Church WH, Column Chromatography Analysis of Brain Tissue: An Advanced Laboratory Exercise for Neuroscience Majors, *Journal of Undergraduate Neuroscience Education (JUNE)*, (2005) **3**(2):A36-A41
16. Church, WH, Doc on the Cape: Reflections of a Prehealth Advisor Patient, *The Advisor: The Journal of the National Association of Advisors for the Health Professions* **29** (2009) 36.

TEXTBOOKS REVIEWED

The World of Chemistry, 2nd edition, - 1995

Chemistry: A World of Choices, 1st edition, Kelter, Carr and Scott - 1997

Modern Analytical Chemistry by David Harvey, McGraw Hill, 2000

JOURNAL REFEREE

Journal of Microcolumn Separations

Brain Research Bulletin

Analytical Chemistry

Journal of Neural Transmission

Neurology

Journal of Neuroscience Research

Neuroscience Letters

GRANTS REVIEWER

National Institute of Environmental Health Sciences

James D. Watson Investigator Program, New York Science, Technology and Academic Research (NYSTAR)

Faculty for Undergraduate Neuroscience – Undergraduate Research Travel Award

GRANTS AWARDED

External

Burroughs Wellcome Company

American Chemical Society

National Science Foundation

National Institutes of Health - AREA

Research Corporation

North Carolina Biotechnology Center

Donaghue Medical Research Foundation

American Chemical Society - Project SEED

Undergraduate Research Fellowship – Pfizer Global Research and Development and the Connecticut

Business and Industry Association (CBIA)

Howard Hughes Medical Institute Summer Research Associate Program

Consortium for High Achievement and Success (CHAS)

Internal

East Carolina University

Trinity College

Awards in bold involved undergraduate research/teaching components

PROFESSIONAL PRESENTATIONS WITH UNDERGRADUATE CO-AUTHORS

1. "Functional Relationships Between Ascorbic Acid and Uric Acid", W.H. Church* and **J.D. Henderer**, presented at AAAS Annual Meeting, New Orleans, LA, Feb. 1990.
2. "Functional Relationships Between Ascorbic Acid and Uric Acid", W.H. Church and **J.D. Henderer***, presented at 199th ACS National Meeting, Boston, MA, April, 1990.
3. "Optimization of Dynamic FAB Parameters for Determination of Enkephalins Using LC-MS", W.H. Church* and **B. Lincoln**, presented at the 201st National American Chemical Society Meeting, Atlanta GA, April 1991.
4. "Identification of an Unknown Compound Observed in Injectable Epinephrine Solutions Following Cyclical Heating, Susan S. Hu and WH Church*, presented at the special "ACS National Undergraduate Research Poster Session", 205th National Meeting of the American Chemical Society, Denver, CO, March 1993.
5. "Effects of Constant Heating vs Cyclical Heating on the Degradation of Injectable Epinephrine Solutions Using Reversed-Phase HPLC with Electrochemical and Photodiode Array Detection, Anthony Henry* and WH Church, presented at the special "ACS National Undergraduate Research Poster Session" 205th National Meeting of the American Chemical Society, Denver, CO, March 1993
6. "HPLC-Electrochemical Detection of Iron-catalyzed Dopamine Oxidation with Various Iron Chelators:, C.A. Respass* and W.H. Church, presented at the 1993 Meeting-in-Miniature, Dept. of Chemistry, ECU, November 1993
7. "Use of Cyclodextrins in Capillary Electrophoresis as Fluorescence Signal Enhancers of NDA-CN derivatized Amino Acids", W.H. Church*, C.S. Lee, and **K.A. Dranchak**, presented at the 212th National Meeting of the American Chemical Society, New Orleans, LA, March 1996.
8. "Capillary Electrophoresis of Glutamate and Aspartate in Brain Dialysate: Improvements in Detection and Migration Time Using Cyclodextrins" W.H. Church*, C.S. Lee, and **K.A. Dranchak**, presented at the Society for Neuroscience Annual Meeting, Washington D.C. Nov. 1996
9. "Capillary Electrophoresis of NDA/CN Derivatized Amino Acids - **Jennifer Garritt*** and W.H. Church, presented at the 27th ACS Northeast Regional - Saratoga Springs, NY, June 1997
10. "A Protocol for the Manipulation of Uric Acid in the Guinea Pig Brain" - **Gabrielle Rappolt*** and W.H. Church, presented at the Eastern Colleges Science Conference - Central Connecticut State Univ., April 1997
11. "Simultaneous Hippocampal Microdialysis and Electrophysiological Measures from Behaving Rats" - J.D. Bronzino, P. Kehoe, W. Church, **V. Watson**, **Y. King** - presented at the Society for Neuroscience Annual Meeting, New Orleans, LA. Oct. 1997
12. "Capillary Electrophoresis of NDA/CN Derivatized Amino Acids - **Jennifer Garritt*** and W.H. Church, presented at the Eastern Colleges Science Conference - Central Connecticut State Univ., April 1997
13. "A Protocol for the Manipulation of Uric Acid in the Guinea Pig Brain" - **Gabrielle Rappolt*** and W.H. Church, presented at the 1st Annual Northeast Undergraduate/graduate Research on Neuroscience Conference - Trinity College, Hartford, CT, May 1997

14. "Capillary Electrophoresis of NDA/CN Derivatized Amino Acids - **Jennifer Garritt*** and W.H. Church presented at the 1st Annual Northeast Undergraduate/graduate Research on Neuroscience Conference - Trinity College, Hartford, CT, May 1997
15. "A Protocol for the Manipulation of Uric Acid in the Guinea Pig Brain" - W.H. Church*, **G. Rappolt**, and **R. Goldsmith**, presented at the Society for Neuroscience Annual Meeting, New Orleans, LA. Oct. 1997
16. "Complexation Mechanisms of Beta-cyclodextrins as separation modifiers in capillary electrophoresis" **J.L. Garritt*** and W. H. Church, presented at the I.M. Kolthoff Enrichment Awards in Analytical Chemistry, 217th American Chemical Society National Meeting, Anaheim, CA March, 1999.
17. "Capillary Electrophoresis and Characterization of beta-cyclodextrin Complexes" **J.L. Garritt*** presented at the Connecticut Valley Section- ACS Undergraduate Research Symposium, Wesleyan University, Middletown CT, April 17, 1999
18. "Effects of purine enzyme inhibitors on monoamine oxidase activity" **D. Machado*** and W.H. Church, presented at the 3rd Annual Conference of the North East Under/graduate Research Organization for Neurosciences, Trinity College, Hartford, CT May 1, 1999
19. "Investigations into the cause of Parkinsons Disease using a guinea pig animal model" **A. Orr*** **W.Yorns** and W.H. Church, presented at the 3rd Annual Conference of the North East Under/graduate Research Organization for Neurosciences, Trinity College, Hartford, CT May 1, 1999
20. "Comparative Neurochemical Effects of Purine Enzyme Inhibition and MPTP Administration on Nigrostriatal Subregions in the Adult Guinea Pig", **A. Orr*** **W.Yorns** and W.H. Church, presented at the 219th National Meeting of the American Chemical Society, San Francisco, CA March 2000
21. "Free and Polymer Beta-Cyclodextrin Buffer Modifiers in Capillary Zone Electrophoresis: Effect of Applied Potential on Separation Characteristics" **S. White*** and W.H. Church, presented at the Connecticut Valley Section/American Chemical Society Undergraduate Research Symposium, St. Joseph College, Hartford, CT, April 29, 2000
22. "Comparative Effects of Purine Enzyme Inhibition and MPTP Treatment on Nigrostriatal Catecholamine Metabolism" **A. Orr*** and W.H. Church, presented at the Connecticut Valley Section/American Chemical Society Undergraduate Research Symposium, St. Joseph College, Hartford, CT, April 29, 2000
23. "Comparative Effects of MPTP and Purine Enzyme Inhibition on Catecholamine Neurochemistry" **A. Orr***, **W. Yorns**, and W. Church, Northeast Regional Meeting of the American Chemical Society, University of Connecticut, June 19, 2000
24. "Uric Acid Depletion Mimics MPTP Effects on Dopamine Metabolism in the Substantia Nigra of the Guinea Pig" W.H. Church, **A. Orr**, **W. Yorns*** Society for Neuroscience Annual Meeting, New Orleans, LA. Nov. 5 2000
25. Projections from the Marginal Shell of the Anteroventral Cochlear Nucleus to the Superior Olivary Complex: Axonal Courses and Morphologies, **Duarte G. Machado***, D.Kim and W.H. Church, presented at the 5th Annual Conference of N.E.U.R.O.N, Wellesley College, Wellesley MA, April 28, 2001
26. Effect of Urate Depletion on Nigrostriatal Amino Acids in MPTP-treated Guinea Pigs, **William Yorns*** and W.H. Church, presented at the 5th Annual Conference of N.E.U.R.O.N, Wellesley College, Wellesley MA, April 28, 2001
27. **McGovern RA*** and Church, WH, The Role of N-methyl-D-aspartate Receptors in 1-methyl-4-phenylpyridinium ion (MPP⁺) Toxicity in Murine Cell Cultures, presented at the 7th Annual Conference of North East Under/graduate Research Organization for Neuroscience (NEURON), Wheaton College, May 3, 2003
28. **Bosy L*** and Church, WH, Detection of Dopamine in Cell Cultures, presented at the 8th Annual Conference of North East Under/graduate Research Organization for Neuroscience (NEURON), Wheaton College, May 2, 2004
29. **Cuzzone DA***, **McGovern RA** and Church, WH, The Role of N-methyl-D-aspartate Receptors in 1-

- methyl-4-phenylpyridinium ion (MPP⁺) Toxicity in C57Bl/6 Murine Cell Cultures, presented at the 8th Annual Conference of North East Under/graduate Research Organization for Neuroscience (NEURON), Wheaton College, May 2, 2004
30. **Bee ER*** and Church, WH, Method Development for Monitoring Glutamate in Cell Culture Media via Capillary Electrophoresis and a Fluorescein Probe, presented at the 8th Annual Conference of North East Under/graduate Research Organization for Neuroscience (NEURON), Wheaton College, May 2, 2004
 31. Lennington JB, Papanikolaou D, Figueriedo C, **Bosy L**, Church WH, Salamone JD, and Conover JC Embryonic versus adult neural stem cells: Comparison of in vitro dopaminergic neurogenesis, presented at the International Society for Stem Cell Research Annual Meeting. Boston, MA June 2004.
 32. **Cuzzone, D***, **McGovern, R.**, and Church, WH. NMDA Receptor Expression and Involvement in MPP⁺ Toxicity in C57Bl/6 Mouse Ventromesencephalon Cell Cultures, presented at the 34th Annual Meeting of the Society for Neuroscience, San Diego CA, October 25, 2004.
 33. **Mullin, AP*** and Church, WH, Prostaglandin E2 Reduces Rotenone-induced Apoptosis in SH-SY5Y Cells, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting, Simmons College, Nov. 8, 2008
 34. **Mansoorv SS***, **Lopez-Casanova A**, **Suter T**, Masino S, Ruskin D, and Church WH, Determination of Purine Content Changes in Rat Brain Following Chronic Ketogenic Diet, presented at the American Chemical Society Connecticut Valley Section 2011 Undergraduate Research Symposium, Trinity College, Hartford CT April 30, 2011
 35. **Pierce L*** and Church WH, Differentiation of SH-SY5Y cells by Retinoic Acid: Protection Against Neurotoxicity? presented at the American Chemical Society Connecticut Valley Section 2011 Undergraduate Research Symposium, Trinity College, Hartford CT April 30, 2011
 36. **Hathway PE*** and Church WH, The Effect of the Antioxidants Ascorbic Acid and Uric Acid on Human Neuroblastoma SH-SY5Y Cells, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, Hamden CT, Nov. 6, 2011
 37. **Nicaise A***, **Scinto S*** and Church WH, Changes in Purine Tissue Content in Various Brain Structures of Rats Fed a Ketogenic Diet, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, Hamden CT, Nov. 6, 2011
 38. **Mullin AP**, **Liu T**, and Church WH*, Prostaglandin E₂ (PGE₂) Reduces Rotenone-Induced Apoptosis in SH-SY5Y Cells, presented at the Society for Neuroscience Annual Meeting, Washington DC, Nov. 16, 2011
 39. **Adams R***, and Church WH, Determination of Catecholamine Content Changes in Mouse Brain Following Chronic Ketogenic Diet, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, Hamden CT, April 7, 2013
 40. **Thornton E***, and Church WH, The Effect of Six-Hour PGE₂ Treatment on Rotenone-induced Apoptosis Levels in SH-SY5Y Cells, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, Hamden CT, April 7, 2013
 41. **Nicaise A***, Crocker SA, and Church WH, The Investigation of Glial-derived Factors affecting Neuroblastoma Cell Death, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, Hamden CT, April 7, 2013
 42. **AM Nicaise***, KM Johnson, SJ Crocker, WH Church, TIMP-1 Modulation of Cell Death In Undifferentiated Neuroblastoma Cells, presented at the Annual Meeting of the Society for Neuroscience, San Diego CA, Nov.2013
 43. **PE Hathway*** and WH Church, The Effect of Ascorbic Acid and Uric Acid on SH-SY5Y Human Neuroblastoma Cells, presented at the Annual Meeting of the Society for Neuroscience, Washington D.C., Nov.2014
 44. **T Naragon***, **N Thiemann*** and WH Church, Development of an ImageJ-based human in loop image processing macro for the quantitative analysis of neuroblastoma cell death, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, North Haven CT, Feb. 2015
 45. **F Marino***, **S Njau***, SA Crocker and WH Church, Ultrafractionation of astrocyte cell media to investigate the

effects of an astrocyte-secreted factor on SH-SY5Y neuroblastoma cells, presented at the North East Under/graduate Research Organization for Neuroscience Annual Meeting (N.E.U.R.O.N.), Quinnipiac University, North Haven CT, Feb. 2015

46. **F Marino***, **S Njau***, **T Naragon***, **N Thiemann***, SA Crocker and WH Church, Investigation of a TIMP-1 Modulated Glial-derived Cell Death Inducing Factor, presented at the American Chemical Society, Connecticut Valley Sectional Meeting, April 18th, 2015, University of St. Joseph, West Hartford CT, April 18th, 2015
47. **JG Rubin***, **ML Dyer**, and WH Church, Ketogenic Diet Induces Changes in Purine-Dopamine Neuronal System Interactions, presented at the Annual Society for Neuroscience Meeting, Chicago, IL, Oct. 2015
48. **A Chughtai***, **Meagan Lees**, Luis Martinez and WH Church, Sex differences in neurochemical responses to cocaine and a ketogenic diet in rats, presented at the 32nd NEURON Conference, North Haven CT, Feb. 2019.

* denotes presenter

underline denotes undergraduate author

bold indicates Trinity undergraduate

PROFESSIONAL PRESENTATIONS

- 1."Disruption of a Skilled Motor Task Due to Localized Depletion of Nigrostriatal Dopamine," K. E. Sabol, D. B. Neill, S. A. Wages, W.H. Church, and J. B. Justice, Jr., presented at Society for Neuroscience Meeting, Boston, MA, Nov. 1984.
- 2."Optimization of a Smallbore Chromatographic System for the Analysis of Brain Perfusates of Freely-moving, Behaving Rats," W.H. Church and J.B. Justice, Jr., presented at the 10th International Symposium on Column Liquid Chromatography, San Francisco, CA, May 1986.
- 3."A model of the Dynamics of Dopamine Release, Uptake, and Metabolism in Rat Striatum," J.B. Justice, A.C. Michael, L.C. Nicolaysen. and W.H. Church, presented at Society for Neuroscience Meeting, Washington D.C., November, 1986.
- 4."Applications of Microdialysis to Neuroendocrine Studies" W.H. Church and P.M. Plotsky, presented at the Gordon Research Conference on Analytical Chemistry, New Hampton, NH, August, 1988.
- 5."Smallbore HPLC/ED Methods in Neurochemical Analysis," W.H. Church, presented at the New England Academic Analytical Chemistry Conference, Salem, MA, Nov. 1988.
- 6."Inhibition of Catecholamine Autoxidation By Ascorbic Acid and Uric Acid" W.H. Church and V.L. Ward, presented at the 21st Annual Meeting of the Society for Neuroscience, New Orleans, LA, Nov. 1991.
- 7."Involvement of Uric Acid in *In Vivo* Dopaminergic Neurodegeneration". W.H. Church, V.L. Ward, and J.F. McGinty, presented at the 22nd Annual Meeting of the Society for Neuroscience, Anaheim, CA, Oct. 1992.
- 8."Involvement of Uric Acid in *In Vivo* Dopaminergic Neurodegeneration". W.H. Church, V.L. Ward, and J.F. McGinty, presented at the 205th National Meeting of the American Chemical Society, Denver, CO, March 1993.
- 9."Determination of Nomifensine and Dopamine in Dialysate Using GC/MS." T.L. Townsend and W.H. Church, presented at the 23rd Annual Meeting of the Society for Neuroscience, Washington, D.C., Nov. 1993.
- 10."Separation of Inositol Phosphates with Field Amplification in Capillary Electrophoresis", H.T. Chiang and W.H. Church, presented at the 1993 Meeting-in-Miniature, Dept. of Chemistry, ECU, Nov. 1993
- 11."Uric Acid Levels in the Substantia Nigra of Guinea Pigs under the Effect of Iron: A Microdialysis Study" T.F. Yung and W.H. Church, presented at the 1993 Meeting-in-Miniature, Dept. of Chemistry, ECU, Nov. 1993
12. "Acute Effects of Dopamine Neurotoxins on Uric Acid Levels in the Nigro-striatal System of Guinea Pigs" T.F. Yung and W H. Church, presented at the North Carolina Society for Neuroscience Day, Duke University, Durham N.C. March, 1994
- 13."Acute Effects of Dopamine Neurotoxins on Uric Acid Levels in the Nigro-striatal System of Guinea Pigs" T.F. Yung and W H. Church, presented at the 24th Annual Meeting of the Society for Neuroscience, Nov. 1994.

14. “ Kinetics Studies on NDA Derivatization of Amino Acids” G.A. Marshall and W.H. Church, presented at the 216th ACS National Meeting, Boston, MA Aug 1998.

15. “The Relationship between NR1 Subunit Expression to MPP⁺ Neurotoxicity in Cultured Dopamine Neurons”, WH Church and SJ Hewett, presented at the Annual Society for Neuroscience Meeting, Nov. 2002

INVITED LECTURES

“Analytical Chemistry in the Neurosciences” Department of Chemistry, University of Connecticut at Storrs, April 1989

“Application of Microdialysis/Small Bore HPLC to Neurochemical Studies” Joint Department of Pharmacology and East Carolina Chapter of the Society for Neuroscience, East Carolina Medical School, Greenville NC, Nov. 1990

“Analytical Chemistry in the Neurosciences” Department of Chemistry, James Madison University, Harrisonburg, VA, Oct. 1991

“Uric Acid and Dopamine Autoxidation Involvement in Parkinson's Disease” Department of Biochemistry, East Carolina University School of Medicine, Oct. 1993.

“Uric Acid Involvement in Parkinson's Disease”, Dept. of Chemistry, College of Charleston, Charleston, S.C., Dec. 1993.

“Analytical Chemistry in the Neurosciences” Department of Chemistry, Davidson College, Feb. 1995

“Uric Acid Involvement in Parkinson's Disease” Department of Physical Science, Pembroke State University, April 1995

“Getting Students Excited About Chemistry - Putting Lab Before Lecture and Letting the Data Speak for Itself.” Chemical Education II Symposium, American Institute of Chemists, Inc., Charlotte, NC, Feb. 1996

“Parkinson’s Disease - What Makes the Brain Cells Die?” - Faculty Lecture Series, Trinity College - Feb. 1997

“Analytical Chemistry in the Neurosciences” - Connecticut Valley Section of the American Chemical Society - April, 1997

“Analytical Chemistry in the Neurosciences” - Mount Holyoke College, April, 1998.

“Quantifying Neurotransmitters in Brain Tissue Using HPLC” - Project Kaleidoscope “Undergraduate Neuroscience Education: From the Enchanted Loom to the World Wide Web”: Trinity College, June 23, 2001

“Parkinson’s Disease: Susceptible and Exposed - An Update on Mechanisms of Neuron Death” Faculty Research Committee Lecture Series, Trinity College, Jan. 21, 2004

“Neurodegenerative Disease – Combating a Major Health Issue in Aging America” – Reunion Weekend, Trinity College, June 9, 2006

Church, WH. “Neurodegenerative Diseases: Combating a Major Health Issue in our Aging Society with Undergraduate Researchers”, Trinity College Faculty Lecture Series, The Trinity Club of Washington DC, Nov. 16, 2011

BA/MA ACCELERATED MASTERS PROGRAM STUDENTS (Neuroscience Program)

Jacob G. Rubin – “An Initial Analysis of a Long-term Ketogenic Diet’s Impact on Motor Behavior, Brain Purine Systems, and Nigral Dopamine Neurons in a New Genetic Rodent Model of Parkinson’s Disease”, 2016

Nate Thiemann – Development of Imprinted Polymers for Artificial Acetylcholine Receptors, 2017

HONORS THESIS STUDENTS

CHEMISTRY/BIOCHEMISTRY

- Adam L. Orr (2000): Ph.D.(2008), Department of Neuroscience, Emory University; Research Scientist

Buck Institute for Research on Aging.

- Lucy Honeycutt (2018)

NEUROSCIENCE

- Duarte G. Machado (2001): M.D., University of Connecticut Medical School; Assistant Professor, Dept. of Neurology, Yale University Medical School
- Robert A. McGovern III (2003): M.D. Columbia University; Assistant Professor, Dept. of Neurology, Columbia University Medical School
- Arko Ghosh (2004): Ph.D. Institut fuer Hirnforschung Universitaet Zuerich und Dept. Biologie der ETH Zürich, Zurich Switzerland
- Daniel Cuzzone (2005): M.D. University of Connecticut
- Ariana Mullin (2009): Ph.D. candidate – Emory University
- Brianna Dix (2011):
- Pamela Hathway (2012): Masters of Science candidate – Ludwig-Maximilians-University Munich GR
- Alexandra Nicaise (2013): Ph.D. candidate – Neuroscience: University of Connecticut
- Ryan Adams (2013): Masters of Science candidate – University College: London

SENIOR THESIS STUDENTS

CHEMISTRY/BIOCHEMISTRY

- Jeffrey D. Henderer (1989): MD (ophthalmology), Chair- Dept. of Ophthalmology – Temple Univ. SOM
- Katherine McGowan (1990): MD (pediatrics emergency medicine); CCMC
- Katherine Dranchek (1996): D.O. (general practice)
- Jennifer Garritt (1999): Ph.D. – Epidemiology Yale University
- Sarah White (2000): Research Associate – Genzyme, Inc.

NEUROSCIENCE

- Gabriele Rappolt-Schlickman(1998) – Ph.D. Harvard University
- William Yorns (2001) – D.O. (pediatrics) – Neurology practice
- Reid Offringa (2006): Research Scientist (NY)

RESEARCH STUDENTS

NEUROSCIENCE

Kimbra Wagner – 2012; PhD candidate UMass Boston 2014

HOWARD HUGHES SUMMER RESEARCH ASSOCIATES

Summer 2005 = Kathryn Rodgers and Robert Maloof

Summer 2006 = Kathryn Rodgers

Summer 2007 = Ariana Mullin

Summer 2008 = Ariana Mullin, Patricia Cippichio