

CURRICULUM VITA

Rodney P. Guttmann, Ph.D.

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PRESENT POSITIONS

Professor, Department of Biology  
University of West Florida  
Hal Marcus College of Science and Engineering

ADDRESS

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Pensacola, Florida 32514  
rpg@uwf.edu

EDUCATION

Ph.D. Department of Pharmacology, The University of Alabama at Birmingham, Birmingham, AL, USA, Thesis: The *in situ* proteolysis of tau by calpain. Advisory Committee: G.V. Johnson, R.S. Jope, P.D. Bell, A.B. Theibert, G.B. Brown, 1998.

B.S. Florida State University, Tallahassee, FL, 1991. (Major: Chemistry)

ACADEMIC AWARDS

2019 UWF SGA Distinguished Teacher Award  
2019 Finalist, UWF SGA Distinguished Teacher Award  
2014 Faculty Scholars Award, University of West Florida, College of Science, Engineering, and Health  
2010 Holsinger Teaching Award, University of Kentucky, College of Medicine  
2008 Flexner Master Educator Award, University of Kentucky  
2008 Wethington Award, University of Kentucky  
2006 Wethington Award, University of Kentucky  
1999 NIH Postdoctoral Fellowship, University of Pennsylvania  
1999 Alavi-Dabiri Postdoctoral Award, University of Pennsylvania, Alavi-Dabiri Research Council  
1997 Graduate Student Research Award, University of Alabama at Birmingham, UAB Graduate School

ACADEMIC EXPERIENCE

<u>Title</u>	<u>Date</u>	<u>Location</u>
Professor	2011-present	University of West Florida, Pensacola, Florida
Director	2011-2016	University of West Florida, Pensacola, Florida Center on Aging

Chair (interim)	2014-2016	University of West Florida. Pensacola, Florida. Department of Public Health, Clinical and Health Sciences
Associate Professor	2007-2011	University of Kentucky. Sanders-Brown Center on Aging. Departments of Physiology and Gerontology. Lexington, Kentucky
Assistant Professor	2001-2007	University of Kentucky. Sanders-Brown Center on Aging. Departments of Physiology and Gerontology. Lexington, Kentucky
Postdoctoral Fellow	1998-2001	University of Pennsylvania Department of Pharmacology Philadelphia, Pennsylvania
Graduate Student (Ph.D.)	1991-1998	University of Alabama at Birmingham Department of Pharmacology Birmingham, Alabama

#### CLINICAL TRIAL EXPERIENCE

Principal Investigator	2017-2019	Triad Study (Avanir Pharmaceuticals) University of West Florida, Pensacola, Florida
Principal Investigator	2017-2020	Triad Extension Study (Avanir Pharmaceuticals) University of West Florida, Pensacola, Florida
Principal Investigator	2018-2020	Brexipiprazole Study (Otsuka Pharmaceutical Development and Commercialization, Inc) University of West Florida, Pensacola, Florida

#### PATENTS

Inventor: **Guttman, R.P.** Patent awarded June 10, 2008 - 7,385,027. “ Membrane-permeable peptide capable of calpain inhibition.” University of Kentucky

Inventor: Kraner, S.D., **Guttman, R.P.** and Norris, CM May 21, 2020 Patent pending. Monoclonal antibodies that specifically label a proteolyzed pathologic form of the protein phosphatase calcineurin”. University of Kentucky

#### PUBLICATIONS (PEER-REVIEWED)

Amin, R., Muniz, B and **Guttman, R.P.** Spatial and space-time clusters of brain tumor and CNS incidence and mortality in the contiguous USA: 2000-2014. (under review)

- Guttman, R.**, Sims, P.L, Churchill, C.R., Waters, C.R., Berry, B.M. and Wells, J. (2020) Coconut Oil and its Constituents as a Treatment for Alzheimer's Dementia. *Journal of Student Research*. 9(1). <https://doi.org/10.47611/jsr.v9i1.1046>
- Stafford B., **Guttman, R.P.** and Amin, R.W. (2019) A Spatial Study of Bladder Cancer Mortality and Incidence in the Contiguous U.S.: 2000-2014. *Science of the Total Environment* June 20;670:806-813.
- Amin, R.W., Yacko, E.M., and **Guttman, R.P.** (2018) Geographic Clusters of Alzheimer's disease Mortality Rates in the USA: 2008-2012. *The Journal of Prevention of Alzheimer's Disease* 5(4):231-235.
- Amin, R.W., **Guttman, R.P.**, Harris, Q.R., and Thomas, J.W. (2018) The Prediction of Vancomycin Dose for Recommended Trough Concentrations in Pediatric Patients with Cystic Fibrosis. *The Journal of Clinical Pharmacology*. May;58(5):662-665.
- Talboy, A.N, Aylward, A.M., Lende, D and **Guttman, R.P.** (2016) Young Adults Perspectives on the Selection of Pharmaceuticals for Mental Health Treatment. *Patient Experience Journal*. Vol. 3: Iss. 2, Article 7.
- Pleiss, M, Sompol, P., Hafiz, M.A., Furman, J, **Guttman, R.P.**, Wilcock, D., Nelson, P., and Norris, C. M. (2016) Calcineurin proteolysis in astrocytes: Implications for impaired synaptic function. *Biochim Biophys Acta*. Sep;1862 (9):1521-32
- Ghoshal, S., Bondada, V., Saatman, K.E., **Guttman, R.P.**, and Geddes, J.W. (2016) Phage Display for Identification of Serum Biomarkers of Traumatic Brain Injury. May 7 *J. of Neuroscience Methods*. S0165-0270(16)30078-4.
- Clinkinbeard, T., Goshal, S., Craddock, S., Pettigrew, L. and **Guttman, R.P.** Calpain cleavage of MetAP2 in ischemic stroke. (2013) *Brain Research*. 7;1499:129-35.
- Guttman, R.P.**, and Powell T. (2012). Redox Regulation of Cysteine-Dependent Enzymes in Neurodegeneration. *International Journal of Cell Biology*. (2012). Article ID 703164
- Guttman, R.P.**, and Goshal, S. (2011). Oxidation of thiol-proteases in age-related neurodegeneration. *Free Radical Biology and Medicine*. July 15;51(2):282-8.
- Hafiz, M-A, Baig, I., LeVine, H., **Guttman, R.P.**, and Norris, C.M. (2011). Calpain-mediated proteolysis of calcineurin is increased in hippocampus during mild cognitive impairment and is stimulated by oligomeric A $\beta$ . *Aging Cell*. 10(1):103-13.
- Guttman, R.P.** (2010) Redox regulation of cysteine-dependent enzymes. *Journal of Animal Science*. Apr;88(4):1297-306.
- Li, L., Bolstad, E, Anderson, A, **Guttman, R.P.\*** and Vinogradova, O.\* (2009). NMR Structural Characterization of the Penta-Peptide Calpain Inhibitor. *FEBS Letters*. 583(1):135-40.

- Chen, G, **Guttman, R.P.**, Xiong, Y.L., and Webster, C.D. (2008). Protease Activity in Post-Mortem Red Swamp Crayfish (*Procambarus clarkii*) Muscle Stored in Modified Atmosphere Package. *Journal of Agricultural and Food Chemistry*. 56(18):8658-63.
- Guttman, R.P.** (2007) Recent developments in the therapeutic targeting of calpains in neurodegeneration. *Expert Opinion in Therapeutic Patents*.17, 1203-1213.
- Geddes, J.W., Bondada, V., Sengoku, T., Dubal, S. and **Guttman, R.P.** Strategies for Calpain Inhibition Following CNS Trauma. *Indian Journal of Neurotrauma* (2006).
- McCollum, A.T., Jafarifar, F, Lynn, B.C, Agu, R.U., Stinchcomb, A.L., Wang S, Chen, Q, and **Guttman, R.P.** (2006) Inhibition of calpain-mediated cell death by a novel peptide inhibitor. *Experimental Neurology*. 202(2):506-13.
- Chen Q, Thompson, S.N., Hall, E.D., and **Guttman, R.P.** (2006) Identification and characterization of PEBP as a calpain substrate. *Journal of Neurochemistry*. 99: 1133-1141.
- Marcum, J.L., Mathenia, J.K., Chan, R. and **Guttman, R.P.** (2005) Oxidation of thiol-proteases in the hippocampus of Alzheimer's disease. *Biochemical and Biophysical Research Communications*. July 11;334(2):342-348.
- Guttman, R.P.**, Day 3<sup>rd</sup> GA, Wang, and Bottiggi KA. (2005) Identification of a novel calpain inhibitor using phage display. *Biochemical and Biophysical Research Communications*. August 12;333(4):1087-92.
- Yadavalli R, **Guttman, R.P.**, Centers AP, Seward T, Williamson RA, and Telling G.C. (2004) Prion propagation is a calpain-dependent process. *Journal of Biological Chemistry*. 279(21):21948-21956.
- McCollum, A.T., Jafarifar, F., Chan, R., and **Guttman, R.P.** (2004) Oxidative Stress Inhibits Ionomycin-Mediated Cell Death in Cortical Neurons. *Journal of Neuroscience Research*. 76(1): 104-109.
- Simpkins, K., **Guttman, R.P.**, Dong Y, Chen Z, Sokol S, Neumar R, and Lynch DR. (2003) Selective activation induced cleavage of the NR2B subunit by calpain. *Journal of Neuroscience*. 23(36):11322–11331.
- Eberz, A.J., **Guttman, R.P.**, Giasson, B.I., Day III, G.A., Lee, V.M-Y, Trojanowski, T.Q. and Lynch, DR. (2003) Distinct Cleavage Patterns Of Normal And Pathologic Forms Of Alpha-synuclein By Calpain I *In Vitro*. *Journal of Neurochemistry*. 86(4):836-847.
- Neumar, R.W., Xu, Y.A., Gada, H., **Guttman, R.P.** and Siman, R. (2003) Crosstalk between calpain and caspase proteolytic systems during neuronal apoptosis. *Journal of Biological Chemistry*. 278(16):14162-7.

- Guttman, R.P.**, Sokol S., Baker, D.L., Simpkins, K.L., Dong, Y. and Lynch, D.R. (2002) Proteolysis of the NMDA receptor by calpain in situ. *Journal of Pharmacology and Experimental Therapeutics*. 302(3):1023-30.
- Lynch, D.R., and **Guttman, R.P.** Excitotoxicity: Perspectives based on NMDA receptor subtypes. (2002) Samuel Enna ed. *Journal of Pharmacology and Experimental Therapeutics*. 300:717-23.
- Grant, E.R., **Guttman, R.P.**, Seifert, K.M. and Lynch, D.R. (2001) A region of the N-methyl-d-aspartate receptor 2A subunit that is sufficient for potentiation by phorbol esters. *Neuroscience Letters*. 310(1):9-12.
- Lynch, D.R., and **Guttman, R.P.** (2001) NMDA Receptor Pharmacology: Perspectives From Molecular Biology. *Current Drug Targets*. 2(3):215-31.
- Guttman, R.P.**, Baker, D.L., Seifert, K.M., Cohen, A.S., Coulter, D.A. and Lynch, D.R. (2001) Specific proteolysis of the NR2 subunit at multiple sites by calpain. *Journal of Neurochemistry*. 78(5):1083-93.
- Lynch, D.R., Shim, S.S., Seifert, K.M., Kurapathi, S., Mutel, V., Gallagher, M.J. and **Guttman, R.P.** (2001) Pharmacological characterization of interactions of R.O. 25-6981 with the NR2B (Epsilon 2) subunit. *European Journal of Pharmacology*. 416(3):185-95.
- Anegawa, N.J., **Guttman, R.P.**, Grant, E.R., Anand, R., Lindstrom, J., and Lynch, D.R. (2000) N-Methyl-D-aspartate receptor mediated toxicity in nonneuronal cell lines: characterization using fluorescent measures of cell viability and reactive oxygen species production. *Brain Research Molecular Brain Research*. 77(2):163-175.
- McCormack, M.L., **Guttman, R.P.**, Schumann. M., Farmer, J.J., Stolle, C.A., Campuzano, V., Koenig, M., and Lynch, D.R. (2000) Novel frataxin point mutations in two patients with Friedreich's ataxia and unusual clinical features. *Journal of Neurology, Neurosurgery, and Psychiatry*. 68:661-4.
- Zhang, J-W., **Guttman, R.P.** and Johnson, G.V.W. (1998) Tissue transglutaminase is an in situ substrate of calpain: Regulation of activity. *Journal of Neurochemistry*. 71: 240-247.
- Guttman, R.P.** and Johnson, G.V.W. (1998) Oxidative inactivation of calpain in situ. *Journal of Biological Chemistry*. 273: 13331-13338.
- Zhang, J., Lesort, M., **Guttman, R.P.** and Johnson, G.V.W. (1997) Modulation of the in situ activity of tissue transglutaminase by calcium and GTP. *Journal of Biological Chemistry*. 273: 2288-2295.
- Johnson, G.V.W., and **Guttman, R.P.** (1997) Calpain: Intact and Active? *BioEssays*. 19, 1011-1018.
- Guttman, R.P.**, Elce, J.C., Bell, P.D., Isbell, J.C. and Johnson, G.V.W. (1997) Oxidation inhibits substrate proteolysis by calpain I but not autolysis. *Journal of Biological Chemistry*. 272:2005-2012.

**Guttman, R.P.,** Erickson, A.C. and Johnson, G.V.W. (1995) The self-association of tau: Modulation by phosphorylation and oxidation state. *Journal of Neurochemistry*. 64: 1209-1215.

#### WEB-BASED PUBLICATIONS (PEER-REVIEWED)

**Guttman, R.P.** (2014). "Mild Cognitive Impairment: A Risk Factor for Dementia." The Deep South CME Network, UAB Geriatric Education Center, UAB Division of CME.  
<https://cmecourses.som.uab.edu/course/index.php?categoryid=5>

**Guttman, R.P.,** Cantey, N.I., and Bishop, C.J. (2015). "Identifying and Responding to Financial exploitation in Older Adults" The Deep South CME Network, UAB Geriatric Education Center, UAB Division of CME.  
<https://cmecourses.som.uab.edu/course/index.php?categoryid=5>

#### BOOK AND BOOK CHAPTERS (PEER-REVIEWED)

**Guttman, R.P. and** Johnson, G.V. (2000) Measurement of calpain activity in vitro and in situ using a fluorescent compound and tau as substrates. *Methods in Molecular Biology*. 144:143-50.

**Guttman, R.P. and** Johnson, G.V.W. (1999) Calpain mediated proteolysis of the cytoskeleton. Kevin K.W.Wang and Po-Wai Yuen eds. *The Pharmacology and Toxicology of Calpain*. Taylor and Francis.

#### OTHER WORKS (NON-PEER-REVIEWED)

**Guttman, R.P.,** Robison, K. and Bryson, H. "Respect, Empower, Report." Elder Abuse Prevention Program for Poarch Band of Creek Indians. Supported by Administration on Aging. August 2016.

Kanuck, M, Vodanovich, and **Guttman, R.P.** "Clinic Selection and Retention Summary Report." January 2015.

Rivera, S, and **Guttman, R.P.** "Memory Care Activities for Residents in a Dementia Care Unit". August 2015.

Ewen, H.H., Bottiggi, K., Anderson, K., Day, G., Hughes, T.B., Knapp, K., Lawrence, S., Leach, C.R., Traywick, L.S., **Guttman, R.P.,** Teaster, P.B., and Smith, M.D. (2005). Recommendations for the White House Conference on Aging from the University of Kentucky Summer Series on Aging. Occasional Research Report: University of Kentucky.

## CURRENT GRANTS

- 2020-2023 1R15AG066122-01 IDENTIFYING BIOMARKERS FOR THE EARLY DETECTION OF ALZHEIMER'S DISEASE USING PHAGE DISPLAY. NIA. (\$423,000). PRINCIPAL Investigator (20% effort)
- 2019-2021 IMPACT OF ADAPTED DANCE ON MOOD AND PHYSICAL FUNCTION AMONG ALZHEIMER'S DISEASE ASSISTED LIVING RESIDENTS. Florida Department of Health (\$92,000). Co-Principal Investigator (C. Bennett, PI). (10% effort)

## PREVIOUS CONTRACTS AWARDED

- 2017-2019 15-AVP-786-302. A PHASE 3, MULTICENTER, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY TO ASSESS THE EFFICACY, SAFETY, AND TOLERABILITY OF AVP-786 (DEUTERATED [D6]-DEXTROMETHORPHAN HYDROBROMIDE [D6-DM]/QUINIDINE SULFATE [Q]) FOR THE TREATMENT OF AGITATION IN PATIENTS WITH DEMENTIA OF THE ALZHEIMER'S TYPE. Principal Investigator.
- 2017-2020 15-AVP-786-303. LONG TERM, EXTENSION STUDY OF THE SAFETY AND EFFICACY OF AVP-786 FOR THE TREATMENT OF AGITATION IN PATIENTS WITH DEMENTIA OF THE ALZHEIMER'S TYPE. Principal Investigator.
- 2018-2020 331-14-213. A PHASE 3, 12-WEEK, MULTICENTER, RANDOMIZED, DOUBLE-BLIND, A PLACEBO-CONTROLLED, 2-ARM, FIXED-DOSE TRIAL TO EVALUATE THE EFFICACY, SAFETY, AND TOLERABILITY OF BREXPIRAZOLE (OPC-34712) IN THE TREATMENT OF SUBJECTS WITH AGITATION ASSOCIATED WITH DEMENTIA OF THE ALZHEIMER'S TYPE. Principal Investigator.

## PREVIOUS GRANTS AWARDED

- 2015-2018 BUILDING CLINICAL TRIALS AT THE UNIVERSITY OF WEST FLORIDA. Center for Research and Economic Opportunity (\$225,000). Principal Investigator (25% effort)
- 2016-2018 ENHANCING DETECTION OF ALZHEIMER'S DISEASE BIOMARKERS USING PHAGE-DERIVED QUANTIFICATION (PDQ). Florida Department of Health. (\$82,000). Principal Investigator. (10% effort).
- 2015-2016 DEVELOPING A SMILE HOME FOR SENIORS. University of West Florida. (\$9,000). Principal Investigator.
- 2012-2015 POARCH BAND OF CREEK INDIANS ELDER ABUSE PREVENTION GRANT. Administration on Aging. (\$250,000). 10% effort. (UWF: \$95,000). Co-I. (POARCH BAND OF CREEK INDIANS, P.I.)
- 2010-2011 TESTING OF SMALL PEPTIDE INHIBITORS IN THE TREATMENT OF NEUROPATHIC PAIN. GotGrants, University of Kentucky. (\$10,000). Principal Investigator.

2010-2011 USE OF PHAGE DISPLAY TO DEVELOP BIOFLUID PIB BINDING AS A BIOMARKER FOR A.D. NIH, NIA pilot award through Sanders-Brown Center on Aging ADC. (\$20,000) Co-PI, Co-PI Harry LeVine).

2007-2012 CALPAIN AS A THERAPEUTIC TARGET FOR TBI. NIH, NINDS. (\$5,500,000). (Core C, Proteomics and Biomarker Core. 25% effort. Core Leader.

2008-2009 PHASE ZERO AWARD FROM KENTUCKY SCIENCE AND ENGINEERING FOUNDATION TO SUPPORT THE DEVELOPMENT OF PHASE I STTR: *NOVEL PEPTIDES TO PREVENT NEURODEGENERATION FOLLOWING STROKE*. (\$2,000). (Principal Investigator, 3P Pharmaceuticals).

2006-2008 OXIDATION OF THIOL-PROTEASES IN ALZHEIMER'S DISEASE. NIH, NIA. (\$275,000). 33% effort. Principal Investigator.

2004-2009 MITOCHONDRIA, ROS,  $Ca^{2+}$ , AND CALPAIN IN THE AGING CNS. NIH, NIA. (\$11,000,000). P.I.: Phil Landfield. 3% effort. Co-project leader, Project 4.

2003-2007 DEVELOPMENT OF NOVEL CALPAIN PROTEASE INHIBITORS USING PHAGE-PEPTIDE DISPLAY. American Heart Association, Developing Scientist Grant. (\$240,000). 10% effort. Principal Investigator.

2004-2006 DEVELOPMENT OF NOVEL CALPAIN INHIBITORS USING PHAGE DISPLAY. NIH, NINDS. (\$250,000). 50% effort. Principal Investigator.

2004 MAJOR RESEARCH EQUIPMENT GRANT. UNIVERSITY OF KENTUCKY. (\$50,000). Principal Investigator.

2002-2003 DETERMINATION OF THE REDOX STATE OF THE CALCIUM- AND CYSTEINE-DEPENDENT PROTEASE, CALPAIN IN ALZHEIMER'S DISEASE. NIH, NIA. (\$20,000). 25% effort. Principal Investigator.

2000-2001 MODULATION OF NMDA RECEPTOR ACTIVITY BY CALPAIN. NIH, NINDS, Individual National Research Service Grant Award. (\$75,000). 100% effort. Principal Investigator.

1999-2000 CALPAIN-MEDIATED REGULATION OF NMDA RECEPTORS DURING ISCHEMIC INSULT. American Heart Association. Postdoctoral Award. (\$35,000). 100% effort. Principal Investigator.