

## CURRICULUM VITAE

**TERESA R. BROWN**

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### EDUCATION

**Master of Science (M.S.) in Chemistry**, August 2011, Texas Woman's University (TWU), Denton, Texas, USA.

**Bachelor of Science (B.S.) in Biochemistry**, 2008, Texas Woman's University (TWU), Denton, Texas, USA

### **Thesis**

**Master of Science (M.S.) in Chemistry, Master's Thesis:** Aspartate 458 and the Glycine Triad of Human Glutathione Synthetase. Mentor Dr. Mary E. Anderson, Associate Professor, Department of Chemistry & Physics, Texas Woman's University, Denton, Texas, USA.

### EMPLOYMENT

**2020-current – Instructor/General Chemistry Laboratory Coordinator** Department of Chemistry, Mississippi State University, Starkville, Mississippi.

\*instructor of CH1211 labs

\*instructor of CH1221 labs

\*responsible for managing over 30 graduate teaching assistants managing over 70 sections of labs.

\*training and mentoring new graduate assistants

**2019 – 2020 – Lecturer and General Chemistry Laboratory Coordinator**, Department of Chemistry, Mississippi State University, Starkville, Mississippi.

\*instructor of CH1211 labs

\*instructor of CH1221 labs

\*responsible for managing over 30 graduate teaching assistants for managing over 70 sections of labs.

\*training and mentoring new graduate assistants

\*online lab conversion trainer for graduate assistants

**2015 – 2019– Graduate Teaching Assistant**, Department of Chemistry, Mississippi State University, Starkville, Mississippi.

\*taught general chemistry I and II labs

\*taught general chemistry I recitation

\*mentored new teaching assistants

**2014 – 2015– Adjunct Faculty**, Department of Chemistry and Biochemistry, Texas Woman's University, Denton, Texas.

\*taught sustainable physics science, earth science, both with intense lab components

\*wrote syllabi, picked textbooks, used blackboard throughout courses, assisted in curriculum design

**2013 – 2014 – Teacher**, Science department, Mac Arthur high school, Irving, Texas.

\*taught physics and integrated physics/chemistry

\*high technology use campus

\*taught high ESL population

**2011 – 2013 – Adjunct Faculty**, Department of Chemistry and Biochemistry, Texas Woman's University, Denton, Texas.

\*taught sustainable physics science, earth science, both with intense lab components

\*wrote syllabi, picked textbooks, used blackboard throughout courses, assisted in curriculum design

**2008 – 2011 – Graduate Teaching Assistant**, Department of Chemistry & Physics (General chemistry labs, Protein and Nucleic Acid Chemistry lab), Texas Woman's University, Denton, Texas.

\*responsible for Biochemistry lab: teaching, grading, supply ordering and inventory, development of labs.

\*instructional TA for general chemistry

**2004 – 2008 – Research Assistant/lab coordinator/Teaching assistant**, Department of Chemistry & Physics, Texas Woman's University, Denton, Texas.

\*Research assistant and coordinator: conducted original research, trained incoming undergraduate and graduate students, maintained equipment, responsible for ordering equipment and supplies, inventory and MSDS manager.

\*Teaching assistant: assisted in the development of the new Biochemistry lab and was first TA for the beginning years. Responsible for helping develop course, labs and ordering supplies.

### SCHOLARSHIP/CREATIVE ACHIEVEMENTS

#### **Authored Curriculum**

2020 Investigations in Chemistry I – CH1211 – Lab manual. Department of Chemistry. Mississippi State University  
Brown, T., Nettles, W., Mlsna, D

2020 Investigations in Chemistry II – CH1221 – Lab manual. Department of Chemistry. Mississippi State University  
Brown, T., Nettles, W., Mlsna, D

2019 Investigations in Chemistry I – CH1211 – Lab manual. Department of Chemistry. Mississippi State University  
Brown, T., Nettles, W., Mlsna, D

2019 Investigations in Chemistry II – CH1221 – Lab manual. Department of Chemistry.  
Mississippi State University  
Brown, T., Nettles, W., Mlsna, D

### **Publications**

**Brown TR**, Drummond ML, Barelier S, Crutchfield AS, Dinescu A, Slavens KD, Cundari TR and Anderson ME. Aspartate 458 of human glutathione synthetase is important for cooperativity and active site structure. *Biochem Biophys Res Commun.* 2011; (In Press); doi: 10.1016/j.bbrc.2011.06.166.

Slavens KD, **Brown TR**, Barakat KA, Cundari TR, Anderson ME. Valine 44 and valine 45 of human glutathione synthetase are key for subunit stability and negative cooperativity. *Biochem Biophys Res Commun.* 2011; **410**(3): 597-601.

Dinescu A, **Brown TR**, Barelier S, Cundari TR and Anderson ME. The role of the glycine triad in human glutathione synthetase. *Biochem Biophys Res Commun.* 2010; **400**(4): 511-516.

### **Platform Presentations at Professional Meetings**

**T. Brown**, A. Dinescu, TR Cundari, ME Anderson.” Unusual Glycine Triad in Glutathione Synthetase: Key for activity” American Chemical Society Meeting-in-Miniature. Denton, TX 2009

**T. Brown**, Sarah Barelier, Adriana Dinescu, T. R. Cundari, M.E. Anderson. C-Terminal Residues of Human Glutathione Synthetase: A Mutational Study. American Chemical Society Meeting-in-Miniature. Dallas, TX 2008

**T. Brown**, A. Dinescu, T. Cundari, M.E. Anderson, “A-Loop interactions in glutathione synthetase” TWU student symposium, 2007.

**T. Brown**, V. Bhansali, M.E. Anderson, “Site-Directed Mutagenesis Studies of Human Glutathione Synthetase” American Chemical Society’s Meeting in Miniature. Denton, TX 2006.

### **Poster Presentations at Professional Meetings**

**T. Brown**, K. Slavens, M. De Jesus, A. Crutchfield, B. Shesthra, M.L. Drummond, S. Barelier, A. Dinescu, T.R. Cundari, M.E. Anderson. “Function of Aspartate 458 in Human Glutathione Synthetase” American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**), **Washington DC** April 9 – 13, 2011.

**T. Brown**, S. Barelier, A. Dinescu, T.R. Cundari, M.E. Anderson “The A-loop of Human Glutathione Synthetase” American Chemical Society National meeting in **San Francisco, CA** March 2010

**Teresa Brown**, Adriana Dinescu, Kerri Slavens, Margarita De Jesus, T.R. Cundari, and M.E. Anderson. "Unusual Glycine Triad Key for GSH Synthetase Activity" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**), **New Orleans, LA** April 22, 2009 Abstract 854.1.

Kerri Diane Selman, **Teresa Brown**, and Mary Anderson. "Substrate Loop in Glutathione Synthetase: Mutation Analysis" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**), **San Diego, CA** April 05, 2008 Abstract 1009.3

**Teresa R. Brown**, S. Barelier, T. R. Cundari, A. Dinescu, and M. E. Anderson "C-Terminal Residues of Glutathione Synthetase" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**), **San Diego, CA** April 05, 2008 Abstract 1009.2

**T. Brown**, A. Dinescu, Sarah Barelier, T. Cundari, M.E. Anderson "C-Terminal Interactions of Human Glutathione Synthetase" Student Research Symposium at Texas Woman's University, April 2008.

**T. Brown**, A. Dinescu, T. Cundari, M.E. Anderson, "A-Loop Residues in Glutathione Synthetase" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**) in **Washington, D.C.**, April 2007.

K.Selman, **T. Brown**, A.Dinescu. M.E. Anderson, T. Cundari Human, "Glutathione Synthetase Substrate Loop Analysis" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**) in **Washington, D.C.**, 2007.

**T. Brown**, V. Bhansali, and M.E. Anderson, "Site-Directed Mutagenesis Studies of Human Glutathione Synthetase" Texas Woman's University Student Creative Arts and Research Symposium, 2006.

J. Koo, V. Bhansali, **T. Brown**, J. Castano, M.E. Anderson, "Role of Conserved loop residues of human glutathione synthetase" Texas Woman's University Student Creative Arts and Research Symposium, 2006.

**T. Brown**, V. Bhansali, and M.E. Anderson, "Site-Directed Mutagenesis Studies of Human Glutathione Synthetase" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**) in **San Francisco, CA** 2006.

J. Castano, V. Bhansali, **T. Brown**, J. Koo, and M. E. Anderson , "Analysis of Conserved Region of Glutathione Synthetase" American Society for Biochemistry and Molecular biology (**ASBMB**) Annual Meeting at Experimental Biology (**EB**) in **San Francisco, CA** 2006.

### **Honors, Awards and Scholarships**

2020 ChemDawg recognition award for outstanding effort and contributions to the department of Chemistry. Mississippi State University

2019 Most outstanding graduate teaching assistant for the department of chemistry, Mississippi State University

2018 Most outstanding graduate teaching assistant for the department of Chemistry, Mississippi State University.

2011 Graduate Travel Award for American Society for Biochemistry and Molecular Biology (ASBMB) annual meeting at Washington DC.

2011 Chancellor's Research Scholar award, TWU

2008-2009 Elected President for Iota Sigma Pi National honor society for women in Chemistry

2008 Chancellor's Research Scholar award, TWU

2008 Honorable Mention; ASBMB undergraduate poster competition, protein category, San Diego, CA

2008 Undergraduate Competitive Travel Award for American Society for Biochemistry and Molecular Biology (ASBMB) annual meeting at San Diego, CA

2007 TWU Student Travel Award to present research findings in Washington D.C.

2006-2007 Elected Treasurer for Iota Sigma Pi National honor society for women in chemistry

2006-2008 Mary I. Gourley Scholarship-Academic Excellence for Single Parents

2006 TWU Student Travel Award to present research findings in San Francisco, CA

2006 Clark Research Scholarship (TWU Chemistry): for research

## PROFESSIONAL SERVICE

### **Service Activities for the Component, College, University**

2020-current – Graduate Teaching Assistant Coordinator. Department of Chemistry. Mississippi State University

2020—current—Safety Committee. Department of Chemistry. Mississippi State University

2020—current—Undergraduate Curriculum Committee. Department of Chemistry. Mississippi State University

Member of the Iota Sigma Pi National Honor Society of Women in Chemistry, since 2006.

Served as the Treasurer for the American Chemical Society Student Affiliate Kappa Epsilon Mu, 2005-2008

### **Service to the Community**

Assisted in preparation and performance of Chemical “magic” shows for the Denton community to encourage participation of children in sciences at TWU.

Assisted in implementing a TWU student chapter of the Red Cross.