Curriculum Vitae for

Victoria (Tori) B. Dunlap

Department of Chemistry
University of Central Arkansas
Laney Annex 128
201 Donaghey Ave.
Conway, AR 72035
Phone: (501) 450-5938
Email: vdunlap@uca.edu
Maiden Name: O'Bannon

EDUCATION

University of Kentucky; PhD, Molecular and Cellular Biochemistry
June 2013
Mentor: Dr. Trevor P. Creamer

University of Central Arkansas; B.S. *Summa cum Laude* in Chemistry
May 2007
Mentor: Dr. Lori Isom
Advisor: Dr. William Taylor

RESEARCH EXPERIENCE

Graduate Student
University of Kentucky, Department of Molecular and Cellular Biochemistry
February 2009 to June 2013
Mentor: Dr. Trevor Creamer

Graduate Student
University of Kentucky, Integrated Biomedical Sciences and Department of Molecular and Cellular Biochemistry Department
August 2007 to February 2009

Undergraduate Researcher
University of Central Arkansas, Chemistry Department
January 2004 to May 2007
Mentor: Dr. Lori Isom

ACADEMIC WORK EXPERIENCE

Math and Science Tutor
University of Central Arkansas, Academic Success Center
January 2005 to May 2005 and August 2006 to May 2006
Employer/Supervisor: Mr. Charles Lemley

AWARDS AND HONORS

Best Poster Award, 2nd Gordon Research Conference on Intrinsically Disordered Proteins
July 2012

American Heart Association Great Rivers Affiliate Pre-doctoral Fellowship
July 2011 - June 2013

Kentucky Opportunity Fellowship, declined to accept AHA Pre-doctoral Fellowship
July 2011

Molecular and Cellular Aspects of Brain Aging Training Grant Pre-doctoral Fellowship
August 2008 - July 2009

University of Kentucky Graduate School Academic Excellence Fellowship
August 2007 - July 2008

Daniel R. Reedy Quality Achievement Fellowship Award
August 2007 - July 2009

Summa cum Laude, University of Central Arkansas
May 2007

Arkansas Academic Challenge Grant Recipient
August 2003 - May 2007

OUTREACH ACTIVITIES

Assistant Teacher, UCA Challenge Week, University of Central Arkansas, July 2006, July 2007

MENTORING

Rotation Students

Stacy Webb	Fall 2011
Erik Cook	Fall 2011
Farah El Najjar	Spring 2011
Satrio Husodo	Spring 2011
Kara Larson	Fall 2009

NSF- Research Experiences for Undergraduates, Summer Students

Krystal Ruiz-Serrano	2012
Emily Holbrook	2011
Will Towler	2010

Undergraduate Students

Hannah Arvin	Summer/Fall 2012
Emily Pena	Spring 2011
Jessime Kirk	Spring 2011

Anne Jensen	Summer 2009 and 2010
Meghan Hamilton	Spring/Summer 2009 and 2010
Serge Cardinali	Fall 2009

High School Students

Alexandra Fleishman	January 2009 - May 2010

TEACHING RESPONSIBILITIES

University of Central Arkansas

CHEM 1402 - General Chemistry for the Health Sciences (2013-present)

CHEM 1402 is the first of a two-part course designed for students interested in the health science profession. This course covers topics in general chemistry as they relate to the health science profession. The objective of this course is to provide students with a general knowledge of chemistry and how it applies to the health science field. Students should leave this course with an understanding of basic chemical principles and how these principles apply to their daily lives.

CHEM 2450 - Introduction to Organic and Biochemistry (2014-present)

CHEM 2450 is the second of a two-part course designed for students interested in a health science profession. This course covers topics in organic and biochemistry as they relate to the health science profession. The objective of this course is to provide students with a general knowledge of biological chemistry and how it applies to the health science field. Students should leave this course with an understanding of basic chemical principles and how these principles apply to their daily lives.

Bluegrass Community and Technical College, Cooper Campus

Biotechnology 201 - Biotechnology Techniques I (2010-2011)

Responsible for online lectures, laboratory lectures and experiments, and lecture and lab exams. This course was designed to introduce students to the basic theory and techniques necessary for working in a biotechnology laboratory. Course covered media and solution preparation, use and maintenance of analytical equipment, bacterial culture, and bioinformatics.

Biotechnology 202 - Biotechnology Techniques II (2010-2011)

Responsible for online lectures, laboratory lectures and experiments, and lecture and lab exams. Course covered bacterial transformation and culture, protein expression and purification, and protein and enzymatic assays.

University of Kentucky

Biochemistry 401G - Fundamentals of Biochemistry (Fall 2008)

I was a teaching assistant for this course. My responsibilities included tutoring students on an as-needed basis, giving one lecture, and writing exam questions for that lecture. The course

included descriptive chemistry of amino acids and proteins, carbohydrates, lipids, and nucleic acids; discussion of structure and function; metabolism and bioenergetics; and biological information flow.

PUBLICATIONS

Dunlap, TB; Guo, HF; Cook, EC; Holbrook, E; Rumi-Masante, J; Lester, TE; Colbert, CL; Vander Kooi, CW; Creamer, TP (2014). Stoichiometry of the calcineurin regulatory domain-calmodulin complex. *Biochemistry*. doi: 10.1021/bi5004734

Dunlap, TB; Cook, EC; Rumi-Masante, J; Arvin, HG; Lester, TE; Creamer, TP (2013). The distal helix in the regulatory domain of calcineurin is important for domain stability and enzyme function. *Biochemistry*. doi: 10.1021/bi400483a

Dunlap, TB; Kirk, JM; Pena, EA; Yoder, MS (2013). Thermodynamics of binding by calmodulin correlates with target peptide α-helical propensity. *Proteins*. doi: 10.1002/prot.24215

Dunlap, TB; Rumi-Masante; Lester, TE; Creamer, TP (2012). End regulatory region helix is important for calcineurin-regulatory domain stability and calcineurin function. In preparation.

Rumi-Masante, J; Rusinga, F; Lester, TE; **Dunlap, TB**; Williams, TD; Dunker, AK; David, DD; Creamer, TP (2012). Structural basis for the activation of calcineurin by calmodulin. *J. Mol. Biol.* doi:10.1016/j.jmb.2011.11.008

RESEARCH PRESENTATIONS
*Denotes Presenter

1. **Dunlap, TB***; Rumi-Masante, J; Rusinga, FI; Lester, TE; Holbrook, E; Zhang, X; DeRouchey, JE; Dunker, AK; Weis, DD; Creamer, TP (2012). Disordered regulation of calcineurin. *26th Annual Gibbs Conference on Biothermodynamics (Carbondale, IL)*

2. **Dunlap, TB***; Rumi-Masante, J; Rusinga, FI; Lester, TE; Holbrook, E; Williams, TD; Dunker, AK; Weis, DD; Creamer, TP (2012). Disordered regulation of calcineurin. *2nd Gordon Research Conference on Intrinsically Disorderd Proteins (Mount Snow, VT)*

3. **Dunlap, TB***; Rumi-Masante, J; Lester, TE; Dunker, AK; Weis, DD; Creamer, TP (2011). Regulation of calcineurin is controlled by a disordered to ordered transition. *25th Annual Gibbs Conference on Biothermodynamics (Carbondale, IL)*

4. **Dunlap, TB***; Rumi-Masante, J; Lester, TE; Weis, DD; Creamer, TP (2010). Disordered regulation of the phosphatase calcineurin. *24th Annual Gibbs Conference on Biothermodynamics (Carbondale, IL)*

5. **Dunlap, TB***; Rumi-Masante, J; Lester, TE; Hamilton, MS; Cardinali, S; Jensen, AE; Creamer, TP (2009). Disordered Regulation of the Phosphatase Calcineurin. *23rd Annual Gibbs Conference on Biothermodynamics (Carbondale, IL)*

6. Stewart, M*; **O'Bannon, T**; Isom, L (2007). Detection and Characterization of DNA Distortion Induced by Cation-Pi Interactions. *College of Natural Sciences and Mathematics 13th Annual Student Research Symposium (Conway, AR)*

7. **O'Bannon, T***; Isom, L (2006). Site specificity and geometry of H_2O interactions with the conjugated pi systems of DNA bases. *232nd American Chemical Society National Meeting and Exposition (San Francisco, CA)*

8. **O'Bannon, T***; Holman, G; Isom, L (2006). Geometry and Sequence Dependence of H_2O Interactions with the Faces of DNA Bases. *National Conferences on Undergraduate Research (Asheville, NC)* Oral Presentation

9. Huff, C; **O'Bannon, T***; Isom, L (2005). Investigating the interaction between Mg^{2+} and the crystal dehydrating agent 2-methy-2,4-pentanediol (MPD) and its role in DNA bending. *American Society for Biochemistry and Molecular Biology 2005 National Meeting (San Diego, CA)*