Caitlin E. Cassidy Deskins

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Education

Ph.D. Biotechnology, University of Alabama in Huntsville. July 2013. Dissertation Title: "Phytochemical Investigation of *Lonchocarpus* Species: A Search for Antioxidant Compounds".

M.S. Chemistry, University of Alabama in Huntsville. July 2009. Thesis Title: "Cancer-Relevant Biochemical Targets of Cytotoxic *Lonchocarpus* Flavonoids: A Molecular Docking Analysis".

B.S. Chemistry, University of Alabama in Huntsville. May 2007.

Teaching Experience

Assistant Professor of Chemistry, Quincy University

Lecture and Lab: CHE 302 Organic Chemistry I (Fall '13, Fall '14, Fall '15, Fall '16), CHE 401 Physical Chemistry (Fall '13, Fall '15), CHE 303 Organic Chemistry II (Spring '14, Spring '15, Spring '16, Spring '17), CHE 321 Biochemistry (Spring '14, Spring '16, Spring '17), CHE 309 Laboratory Safety (Spring '14, Spring '15, Spring '16, Spring '17), CHE 205 Forensic/Quantitative Chemistry (Fall '14, Fall '16), CHE 125 General/ Organic/ Biochemistry (Spring '15), Introduction to Chemistry Research (Fall '16)

Graduate Teaching Assistant, University of Alabama in Huntsville

Lecture-CH 331 Organic Chemistry I (Summer '12, Fall '12, Summer '13), CH 332 Organic Chemistry II (Spring '13)
Laboratory- CH 105 Introduction to Chemistry (Fall '06, Summer '07), CH 205 Elementary Organic Chemistry (Spring '07, Spring '11), CH 335 Organic Chemistry I (Fall '07, Spring '08, Fall'10, Spring '12) , CH 336 Organic Chemistry II (Fall '11)
Recitation- CH 121 General Chemistry I (Summer '08), CH 332 Organic Chemistry II (Summer '11, Fall '11)

Research Experience

Graduate Researcher, University of Alabama in Huntsville, 8/07-present

Used NMR to determine structures of plant compounds isolated through flash chromatography and high performance liquid chromatography (HPLC). Cloned and purified human caspase-3. Assayed isolated compounds for inhibition of caspase-3. Assayed plant extracts and their isolated compounds for anti-oxidant and xanthine oxidase activities. Used a molecular docking program to dock structures of isolated compounds into cancer protein targets. Mentored new students working in the lab.

Student Researcher, University of Alabama in Huntsville, 11/04-8/07

Used flash chromatography, thin layer chromatography (TLC), and high performance liquid chromatography (HPLC) to separate plant extracts. Combined fractions and evaporated off solvent to determine the yield of each portion of extract.

DAAD (Deutscher Akademischer Austausch Dienst) Internship, University of Freiburg, 6/05-8/05
Assisted a German Ph.D. student with her doctoral research. Her research included developing new methods for the mass spectrometer in detecting different metabolites of alcohol in blood and urine. Used the developed methods of her institute for the mass spectrometer in testing urine and blood for alcohol.

Research Grants

Alabama EPSCoR Graduate Research Scholars Program Award, 8/08-8/10

ASP (American Society of Pharmacognosy) Undergraduate Research Award, 2005

Honors and Awards

Outstanding Graduate Teaching Assistant Award, College of Science, University of Alabama in Huntsville, 2013

ACS (American Chemical Society) Organic Chemistry Award, University of Alabama in Huntsville, 2005

Nektar Therapeutics Chemistry Scholarship Award, Huntsville, AL, 2005

RISE (Research in Science and Engineering) Scholar, DAAD (Deutscher Akademischer Austausch Dienst), Bonn, Germany, 2005

Presentations and Publications

Cytotoxic Flavonoids from the Bark of *Lonchocarpus haberi* from Monteverde, Costa Rica. Caitlin Cassidy, Bernhard Vogler, Jennifer Schmidt Werka, William N. Setzer. 48th Annual Meeting of the Society for Economic Botany, Chicago, Illinois, June 4-7, 2007; Abstract pg. 16.

Inhibition of Caspase-3 by Isolates from *Lonchocarpus haberi* from Monterverde, Costa, Rica. Caitlin Cassidy, Pamela D. Twigg, Talitha Holmes-Caudle, and William N. Setzer. 7th Joint Meeting of AFERP, ASP, GA, PSE, and SIF, Athens, Greece, August 3-8, 2008; paper number PA92.

Cancer-Relevant Biochemical Targets of Cytotoxic *Lonchocarpus* Flavonoids: A Molecular Docking Analysis. Caitlin E. Cassidy and William N. Setzer. Southeast Regional Meeting of the American Chemical Society, San Juan, Puerto Rico, October 21-24, 2009; Poster 142.

Cancer-Relevant Biochemical Targets of Cytotoxic *Lonchocarpus* Flavonoids: A Molecular Docking Analysis. Cassidy, C.E.; Setzer, W.N. *Journal of Molecular Modeling,* **2010**, *16*, 311-326.

Lonchocarpus Polyphenolics and their Biological Activities. Cassidy, C.E.; Setzer, W.N. *The Natural Products Journal*, **2011**, *1*, 75-104.

Phytochemical Investigations of *Lonchocarpus* Bark Extracts from Monteverde, Costa Rica. Deskins, C.E.; Vogler, B.; Dosoky, N.S.; Chhetri, B.K.; Haber, W.A.; Setzer, W.N. *Natural Product Communications*, **2014**, *9*, 507-510.