

Alyssa Tipler

Bachelors of Science in Biochemistry and Molecular Biology
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Education

Bachelor of Science, Biochemistry and Molecular Biology	<i>August 2017-Present</i>
Truman State University	Major GPA: 3.44/4.00

Research Experience

<i>Undergraduate Research Assistant</i>	August
2018-Present	

Truman State University, Kirksville MO

Principal Investigator: Cassidy Dobson, Ph.D

Research Study: Investigating the Molecular Mechanism of DBF enzymes as a Molecular Chaperone: Express recombinant protein from E. coli, purify DBF enzymes using immobilized metal affinity chromatography and Fast Performance Liquid Chromatography (FPLC) assess protein expression on SDS-Page, develop standardized lysozyme-based assay

Undergraduate Research Assistant

Summer 2019

University of Missouri, Columbia MO

Principal Investigator: Laura Schulz, Ph.D

Research Study: Inhibiting an Inhibitor: Effects of Myostatin Deficiency During Pregnancy on the Placenta: Polymerase Chain Reaction (PCR), mice dissection, placental analysis by ImageJ, input data into excel, statistical analysis using Prism

Undergraduate Research Assistant

Summer 2018

University of Missouri, Columbia MO

Principal Investigator: Lesa Beamer, Ph.D

Research Study: Preliminary Biochemical Studies of Serine Hydroxymethyltransferase 8 (SHMT8) from Soybean Plants: X-ray crystallography, dynamic light scattering (DLS), SDS-Page, present findings at professional conferences.

Research Interests

Health Disparities
 Preterm labor
 Endometriosis
 Pre-eclampsia
 Hormone signaling
 Epigenetic gene regulation

Conference Presentations

National Conferences

Tipler, A., Addison, Z., Korasick, D., Pramod, K., Tanner, J., Mitchum, M., Beamer, L. (2019, February) *Preliminary Biochemical Studies of Serine Hydroxymethyltransferase 8 (SHMT8) from Soybean Plants*. **Poster** Presentation at the Emerging Researchers National (ERN) Conference in Washington, D.C.

Peterson, K., Tipler, A. Butler, M. Dobson, C. (2019, October) *Investigating the Molecular Mechanism of Disulfide Bond Forming Enzymes*. **Poster** Presentation at the 2019 Midwest Regional Meeting of the American Chemical Society in Wichita, KS.

Regional Conferences

Tipler, A., Held, A, Miller, B., Dobson, C. (2019, September) *Natural Aromatase Inhibition as a Treatment for Endometriosis and Breast Cancer*. **Oral** Presentation at the 2019 MKN Hartland Research Conference in Kansas City, MO.

Tipler, A., DeCata, J., Opouku, R., Schulz, L. (2019, December) *Inhibiting an Inhibitor: Effects of Myostatin Deficiency During Pregnancy on the Placenta*. **Poster** Presentation at the 2019 Summer Undergraduate Research & Creative Achievements Forum in Columbia, MO.

Tipler, A., Addison, Z., Korasick, D., Pramod, K., Tanner, J., Mitchum, M., Beamer, L. (2019, February) *Preliminary Biochemical Studies of Serine Hydroxymethyltransferase 8 (SHMT8) from Soybean Plants*. **Poster** Presentation at the 2019 MoLSAMP Symposium in Jefferson City, MO

Tipler, A., Dobson, C., (2019, March) *Investigating the Molecular Mechanism of DBF Enzymes as a Molecular Chaperone*. **Oral** Presentation at the 2019 MoLSAMP Symposium in Jefferson City, MO

Awards & Honors

Research Awards

McNair INDV 460 Research Experience for Undergraduates (\$4,000) University of Missouri-Columbia	<i>Summer 2019</i>
Ronald E. McNair INDV 360 Internship (\$600) Truman State University	<i>Summer 2019</i>

Fall 2019 Conference Travel Scholarship (\$500) 2019	May
Emerging Researchers National Conference Travel Grant Awardee 1 st Place Poster Presentation (\$250)	April 2019 March 2019
2019 MoLSAMP Symposium Research Experience for Undergraduates (\$4,000) University of Missouri-Columbia	Summer 2018

Institutional Recognition & Honors

2019 New Student Leader Award	April 2019
Rising Activist Award	April 2019
Truman State University, Kirksville <i>Ronald E. McNair Scholar</i>	November 2018
Truman State University, Kirksville President's List	December 2018
Truman State University Missouri Louis Stokes Alliance for Minority Participation (MoLSAMP) Truman State University, Kirksville	August 2017

Tutoring and Mentoring Experience

STEM Academic Trainer

MoLSAMP & STEP, Truman State University August
2019-Present

Cell Biology and Genetics

Encouraged course retention, provided assistance in 4-year graduation plans

Level Up: MoLSAMP Summer Sophomore STEM Institute July 28- August 4, 2019
Harris-Stowe State University

An intensive academic and student success summer immersion program designed to assist underrepresented minorities (URM) STEM students with transiting to their second year of study at a college or university. During the program, I assisted with the following: designing an Academic Success Graduation Plan; examine STEM careers and STEM graduate programs; navigate academic research databases, interpret and compose academic abstracts and examine academic research articles

STEM Academic Trainer

Center for Diversity & Inclusion, Truman State University August 2018-May 2019

Introductory Biology & Introductory Chemistry

Prepared academic support sessions for students to improve academic performance, course

completion, and learning skills; improved organizational and study skills of students

Campus Involvement

Association of Black Collegians: Vice President, Secretary August 2018- May 2019
Truman State University

Raised awareness about African and African American history and perspectives on campus; Ensure all the affairs of ABC are carried out in a smooth and transparent

manner; Make necessary arrangements for the club meetings, including making room reservations

Cheerleading

December 2017- December 2018

Truman State University

Connected with 20+ cheerleaders in order to bring school spirit for basketball and football games; Engaged in workout Monday-Thursday for 2 hours a day with cheerleaders

Community Engagement

College Academy

August 6, 2018 & August 5, 2019

Pattonville High School

A week-long college academy for first-generation college students. On day one of College Academy I participated in a student panel about my experience as a first-generation college student. Students learned about the difference between high school and college; how to find the right college for them; application process; how to find and apply for scholarships; how to build relationship with faculty on their campuses; and financial aid

Professional Affiliations

Ronald E. McNair Achievement Program, Scholar

November 2018-Present

Missouri-Louis Stokes Alliance for Minority Participation, Scholar

August 2017-Present

American Chemical Society, Scholar

May 2019-Present