Ezra L.C. Hackler

Education:

B.S. Biochemistry, Texas State University

ACS and ASBMB Certified

August 2017 - May 2022

M.S. Biochemistry, Texas State University

August 2022 - May 2024

Research Experience:

Texas State University, Department of Chemistry and Biochemistry, San Marcos, Texas

Undergraduate Researcher, May 2019 - May 2022

Principal Investigator: Dr. Karen A. Lewis, PhD

- Formalized the structural characteristics of the C-terminal region of the plant RNA transport proteins, *At*LaRP6a and *At*LaRP6c as being intrinsically disordered proteins.

Graduate Researcher in pursuit of M.S. Biochemistry, May 2022 – May 2024

Principal Investigator: Dr. Karen A. Lewis, PhD

- Investigated the role of phosphoserine events on the intrinsically disordered C-terminal region of *Hs*LaRP6, an important mRNA transport protein for collagen I and III synthesis.

Work Experience:

Lecturer Texas State University August 2024 – Present

- CHEM 1341 – General Chemistry 1
    - Fall 2024, Spring 2025, Fall 2025, Spring 2026
- CHEM 1342 – General Chemistry II
    - Fall 2026
- CHEM 3276 – Biochemistry Techniques

    - Spring 2025, Summer II 2025, Fall 2025, Spring 2026
- CHEM 2150 – Biochemistry and Metabolism Lab
    - Summer II 2025

Lab Instructor Texas A&M: San Antionio August 2024 – December 2024

- CHEM 1111 – General Chemistry 1 Lab

GIA Texas State University August 2022 – May 2024

- Taught upper-level biochemistry courses to biochemistry majors and minors. Emphasized laboratory skills including purification from native sources, chromatographic techniques, recordkeeping skills, and data analysis.

Professional and Educational Development:

Organizer for Chemistry Departmental Semi-Annual Instructional Assistant (IA) Safety Training

- Contacted presenters, developed material, and ran the safety training for student workers.
    - *Fall 2025 – Present*

Group Lead for Learning Assistant (LA) Summer Development Institute – Summer 2026

- Led a small group of students and faculty in the creation of activities and worksheets necessary to the General Chemistry I curriculum.

Research Skills:

Biophysical characterization of proteins, specifically intrinsically disordered proteins.

- Circular Dichroism
- Analytical Size Exclusion Chromatography
- Dynamic Light Scattering
- Data Transformation

Extensive experience with protein expression and purification using E. *coli* recombinant expression platforms.

- Immobilized Metal Ion Chromatography
- Size Exclusion Chromatography
- Protein Expression Trials
- Cell Transformation using Selection Factors

Extensive experience creating mutant libraries of proteins using a variety of microbiology techniques.

- Classical PCR
- Site Directed Mutagenesis

- Agarose Gel Analysis and Purification
- Restriction Enzyme Reactions for Novel Plasmid Manufacture

General analysis techniques for protein biochemistry.

- SDS-PAGE
- Coomassie Staining
- Western Blotting
- Silver Staining

Presentations:

Poster Presentations:

The Structural Characterization of *At*LaRP6a C-Terminal Domain, Women in Science and Engineering (WISE) conference, Texas State University, San Marcos, TX 2020

The C-Terminal Domain of the RNA Binding Protein LaRP6 is Intrinsically Disordered, The Southwestern Regional Meeting (SWRM) of the American Chemical Society, Austin, TX 2021

Awards:

Texas State University:

2024 Outstanding Graduate Instructional Assistant

- Awarded for outstanding performance in the IA role of the upper-level biochemistry courses taught at TSU.

2020 Excellence in Laboratory Research Award

- Awarded in honor of outstanding academic research performance during the pandemic transition period.

Professional Memberships:

American Chemical Society, Undergraduate Member

August 2021 - December 2022

American Society of Biochemistry and Molecular Biology (ASBMB)

December 2022 - Present

Certifications:

Collaborative Institutional Training Initiative (CITI):

- Basic Biosafety (25 September 2020)
- Biomedical Research – Student Researchers (25 September 2020)
- Hazard Communication (24 September 2020)
- NIH Recombinant DNA Guidelines (09 September 2020)

Eagle Scout *2017*

- My Eagle scout service project was centered around the development of a mile of hiking path at Lake Somerville State Park. This experience developed my abilities as a leader, as well as my ability to interface with several different people at once to develop and execute a plan.