Mackenzie Miller graduated UW–Madison with a Chemistry degree and an Education and Educational Services certificate in May 2018. During her undergraduate career, Mackenzie was a teaching assistant for two semesters of General Chemistry and one semester of the Introductory Organic Chemistry Laboratory. One highlight of her experience as a TA was giving a guest lecture on thermodynamics during a General Chemistry whole class meeting. She is currently pursuing a Masters in Curriculum & Instruction at UW–Madison and will be dual certified to teach Chemistry and English as a Second Language by August 2019. Mackenzie is looking forward to fall 2019, when she will begin her career in secondary science education.

I work on a project in the Cavagnero Group using single-molecule fluorescence confocal microscopy to examine the conformations of nascent protein chains bound to the ribosome. I designed and assembled the confocal microscope for single-molecule Förster Resonance Energy Transfer (FRET) experiments of ribosome-bound peptide chains labelled with two fluorophores. My current research goal is to incorporate two fluorophores of interest into the nascent protein chain sequence during protein translation. This sample will be used for single-molecule FRET experiments, in which data regarding photon arrival time, FRET efficiency and anisotropy of individual nascent chains will be collected. This data will be used to distinguish and analyze conformational subpopulations of ribosome-bound protein chains which have been previously undetectable in bulk experiments. I will be graduating in the spring! I am currently applying to graduate schools for a Master’s Degree in Secondary Science Education, and I plan to teach high school chemistry in a high-need school district following graduate school.

Tess Carlson
ACS Hach Scholar

Be sure to VOTE!

Unique ballots were emailed to all WI Local Section members.

Vote, then record your vote.
Do it by Thursday, 11/15.