

I am Ryan Doss, a M.S. student in Dr. Hedlund's Lab at the UNLV School of Life Sciences studying the activity and evolutionary history of unusual polymerase I enzymes fused to a uracil-DNA glycosylase. I've lived across the United States, and have grown up seeing how different wildlife and plants can be. This has naturally led me to Dr. Hedlund's lab, where I get to see how vastly different microbes and their molecular systems can be in different habitats.

My Research for this fellowship will focus on uncovering the activity and evolutionary history of a fusion protein widely found in metagenomes from across the world, but only found in a few cultivated viruses and only one cultivated organism. This fusion seems to have diverged from canonical polymerase I's extremely early, and will help further our understanding of evolution.

My career goal is to eventually apply our understanding of structural biology to what we know of molecular systems to better unravel the complexities of unclassified proteins and the systems that they make up.