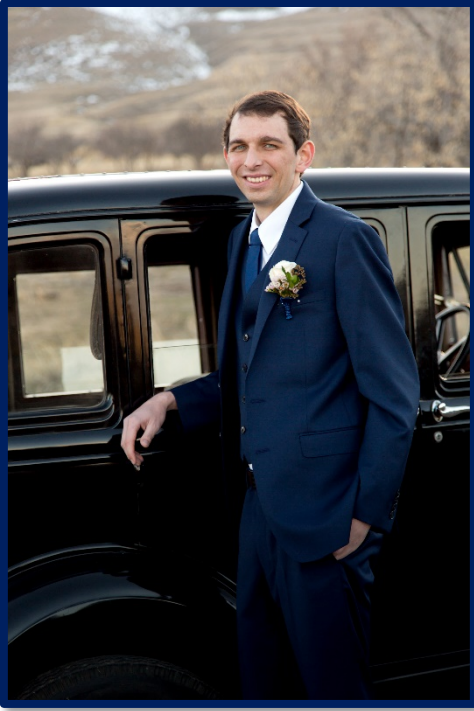


2017 Department of Biology Awards

RICHARD J. AND MARION A. SHAW SCHOLARSHIP

Michael Kay Gudmundson, Biology



Biology has always been my passion. Even at a young age, I was determined to do what I needed to in order to pursue a career in biology related field of study. While growing up, I witnessed many close neighbors and family members battle through diseases. I wanted to know what causes the disease, how it interacts with different treatments and, most importantly, I wanted to know how to cure it.

My goal is to pursue a career in medicine. I am interested in medical research using ecological studies. It is fascinating to observe interactions between different organisms like fungi and trees, and cellular communication. I enjoy observing and researching the effect that each organism has on its environment. My desire is to discover cures for some of the world's most elusive diseases such as cures for cancer and diabetes, and restoring damaged areas of someone's brain.

During the academic school year, I have been working as a research aid for Dr. Jim Lutz in the USU Forest Ecology Lab, in participation with the Western Forest Initiative. We are working to determine spatial tree distribution in large tree plots throughout the Western United States including Utah, Yosemite and Washington State. I have participated in the data collection, entry and testing of these plots.

I have also been conducting my own research, working alongside Dr. Lutz, studying the Amillaria root disease and its effect on hardwood and conifer tree species. I presented my current findings at the USU Student Research Symposium on April 14 and will be presenting at the USU Department of Biology Undergrad Research Symposium on April 26.

To further my research, I would like to go to the Wind River Forest Dynamics Plot to verify that the estimated area is in fact infected. More importantly, I want to collect Amillaria specimens to verify how many separate individuals there are and where they are located through DNA comparison and use them to determine if they have antibiotic capabilities.

After graduating from Utah State University, my plan is to attend medical school. I would love to be accepted to the University of Utah but I will be happy to go where I am accepted. I want to focus my study in clinical pathology, performing pathogenic research. After graduating medical school and finishing residency as a clinical pathologist, I plan to use my knowledge to research and develop cures for those suffering from cancer, diabetes, and brain disease.