**Danielly Aguirre**, Miami University, Oxford, Ohio, USA for their project: *Petrological Insights into the Tectonomagmatic History of the Eocene Absaroka Supergroup, WY*.

I am a second-year master's student in the Department of Geology and Environmental Earth Science at Miami University working with Dr. Claire McLeod. My thesis research focuses on providing new insights into arc crustal evolution and magma differentiation processes through textural and chemical investigation of amphibole populations. Within arc systems, amphibole plays a critical role in governing melt evolution and volatile budgets; however, it is often considered a "cryptic" phase and lacking in erupted products. In this work, amphibole fractionation in arc systems is being investigated through study of amphibole-rich xenoliths and their amphibole-bearing host dacites from the Eocene Absaroka Volcanic Supergroup in eastern Yellowstone National Park.

Through the generosity of the Howard and Jean Lipman Foundation Research Award, in-situ analysis of multiple amphibole populations will be conducted via Electron Probe Microanalysis (EPMA) followed by Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS). EPMA data will be used to characterize amphibole types and applied to geothermobarometers to constrain the pressure, temperature, $H_2O$ contents, and depth of amphibole fractionation within the lithosphere. LA-ICP-MS data will support further evaluation of crystallization histories, quantify compositional zoning, and evaluate potential magma dynamics within the lithosphere.

I am from Nashville, Tennessee and received a B.S. in Geoscience at Middle Tennessee State University. As an undergraduate, I participated in group-based research with Dr. Warner Cribb.

I will be presenting my MS thesis research at the 2026 GSA Connects meeting in Denver and am thankful for the supportive community that the MGVP and GSA provide for early career researchers.