Dankwa Josephine, Missouri State University, Springfield, MO, for her project: *Reassessing Magma Mush Dynamics at Fogo Volcano: Geochronological and Thermochronological Insights from Syenite Xenoliths in the Azores.*

Josephine is a second year Master's Student at Missouri State University. She earned her bachelor's degree in Earth Sciences from the University of Ghana, where she developed an interest in geologic field mapping and Geochemistry. She found it fascinating how the different elemental compositions of rocks can convey a wealth of information to the geologist. Her undergraduate research focused on studying the geology of Southeastern Ghana, which involved field mapping, geochemical and petrographic studies. Her current research aims to understand the plumbing system of the Fogo Volcano in São Miguel, Portugal. By integrating U-Th geochronology, zircon geochemistry with U-Th/He thermochronology on syenite xenoliths, her research will contribute to knowledge of magma mush dynamics.

Combining U-Th and U-Th/He dating will reveal the crystallization and exhumation ages of the syenites, respectively. This approach will provide a clearer understanding of the residence timescale, thermal and storage history of the syenites. Additionally, zircon geochemistry will trace magma differentiation and thermal histories, providing insights into the crystallization processes and evolution of the magma reservoir. Her findings will contribute to a better understanding of the connection between volcanic and plutonic processes in emerging magma mush dynamics.

Josephine can conduct U-Th geochronology on her samples with the help of the Lipman Research Grant. She is grateful to the Howard and Jean Lipman Foundation and the Geological Society of America's Mineralogy, Geochemistry, Petrology, & Volcanology Division for this award.