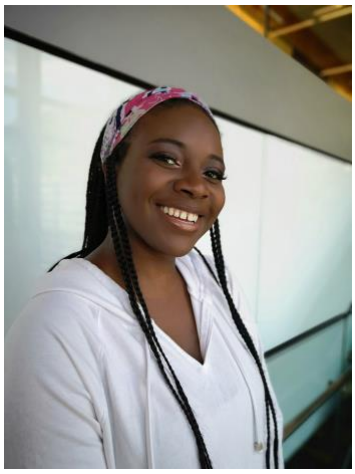
2019 Alber Science & Engineering for Global Health Fellow

Whtiney Mbgara, UC Berkeley MPH Candidate in Epidemiology, PhD Candidate in Environmental Science, Policy, and Management, Getz Lab



Whitney Mgbara is a second year graduate student at UC Berkeley. In concurrence with her PhD in Environmental Science Policy and Management, Whitney is pursuing an MPH in Epidemiology. Her joint program allows her to explore the intersections of the two fields alongside her advisor Wayne Getz. Her research interests bridge the fields of disease ecology, movement ecology, and epidemiology to examine spatial and temporal factors influencing the transmission of emerging and re-emerging zoonoses including Leishmaniasis, Ebola Virus Disease (EVD), and Influenza. Whitney received her Bachelors of Science at Arizona State University in the School of Human Evolution and Social Change in 2017, where she majored in Applied Mathematics for Life and Social Sciences and Global Health. As an Alber Science & Engineering Fellow, she is expanding her work to examine bio-geographic and demographic factors influencing EVD transmission in West Africa with collaborators at Virginia Tech. Also, she plans to work in West Africa to work further on EVD and data collection.

Fellowship Proposal

I plan to investigate environmental factors that promote disease spread using mathematical epidemiology. Despite our recent advances, our understanding of how environmental actors such as climate, landscape configuations, and host movement trigger and maintain disease transmission over time remains vague. As a result, zoonotic diseases such as Ebola Virus Disease (EVD), represent an emerging threat to global public health. Specifically, I aim to understand how land cover change (e.g. deforestation) and Ebola virus host migration impact the probability of spillover events (transmission from infected reservoirs to the human hosts) because there is an increasing amount of evidence that suggests increases in EVD occurrence are associated with forest loss and habitat destruction.