

## **II. Abstract**

Despite years of interventions, malaria incidence is still high, particularly in developing countries. Many current management strategies target the mosquitoes which vector malaria with chemical pesticide treatments, but growing insecticide resistance in wild mosquito populations threatens to undermine these efforts. Fungal biopesticides offer a viable alternative to traditional chemical pesticides and have the potential to strongly reduce selection for resistance. Minimizing this selection requires a thorough understanding of the biotic and abiotic factors which affect both malarial development rate and fungal efficacy. Previous experiments have shown that temperature significantly affects the mortality rate of mosquitoes infected with fungal biopesticides as well as mosquito immune responses. This study will therefore (1) examine the effects of coinfection on malarial and fungal growth dynamics within the mosquito host and (2) determine whether there are significant interactions between coinfection and temperature.