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Hombamane holds a master's degree in Microbial and Cellular Biotechnologies and is currently pursuing a Ph.D. in Microbiology and Immunology at the University of Lomé in Togo. She is a medical biologist at the Institut National d'Hygiène (INH), a research institution that acts as Togo's central public health laboratory. She benefits from the research platform of the Unité de Recherche en Immunologie et Immunomodulation (UR2IM) at the University of Lomé, where Hombamane also contributes to student training. Her primary research focuses on neglected tropical diseases, specifically, the epidemiology of the diseases, helminths resistance to drugs investigated, anti-parasite immunity, and exploring the role of immune cells in the pathophysiology of hookworm infection.

Project

Molecular Characterisation of Single-Nucleotide Polymorphisms (SNPs) associated with Resistance of Ancylostoma Duodenale to Albendazol in Hookworm-Infected Individuals in Togo

Hookworms are soil-transmitted helminths (STH) that constitute a major public health problem, especially in sub-Saharan Africa. The World Health Organization recommends periodic mass drug administration (MDA) of anthelminthics (albendazol) in order to control this disease. Our recent study conducted in helminths endemic areas in Togo showed an increased in the prevalence of hookworm although the MDA programme. Raise the question of possible resistance of *A. duodenale* to albendazol in the study population. In this study we aimed to characterize a single-nucleotide polymorphisms (SNPs) associated with resistance of *Ancylostoma duodenale* to albendazol in hookworm-infected individuals in Togo, using molecular diagnosis. Our findings will help to the best understanding of hookworm resistance mechanism to albendazol, establish the relationship between the increase in the prevalence of *A. duodenale* and resistance to albendazole, and help to find new strategies to reduce the prevalence of hookworm in this area.