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Jeanne is a PhD Student in Parasitology at the University of Yaoundé I and Research Assistant the Higher Institute of Scientific and Medical Research (ISM, Yaoundé, Cameroon). She is building expertise in molecular parasitology and entomology and her research focuses on exploring the impact of host-parasite-vector interactions on human and animal health. She has therefore been part of research projects on the host-vector interaction of some vector-borne tropical diseases, including trypanosomiasis, malaria and onchocerciasis. Through her three years' experiences in the field of research within the ISM team, Jeanne has developed a good research skills and scientific rigor. This allowed her to be co-author of peer-reviewed publications in the field of parasitology and entomology. She has also participated in many conferences and seminars for research methodology and capacity building and is member of GDRI Network.

Project

Investigating the Circulation of Human Babesiosis and its Potential Impact on Malaria Misdiagnosis in Three Hospitals in Ngaoundere Health District (Adamawa, Cameroon)

Babesia spp and *Plasmdodium* are two infectious protozoans responsible for babesiosis and malaria, respectively. The endemic areas of both diseases overlap in Africa, especially in animal breeding areas (cattle) where the babesiosis vector is commonly found. If the transmitting vectors are fundamentally different (parasite-infected tick and parasite-infected mosquito bites), the physiopathology of these diseases during human infections is closely related to intra-erythrocyte and hepatocyte stages. The blood stage of the two parasites is, therefore, responsible for the clinical manifestations that are remarkably similar for the two diseases. Moreover, due to the remarkable morphological similarities, both parasites are not clearly identifiable during parasitological diagnostics, and diagnostic protocols do not include consideration of *babesia spp* in the diagnostic process.

Babesia spp is not sensitive to antimalarial treatment, so it is fundamental to study the impact of the poor clinical and biological differential diagnosis of these two parasites in the context of malaria control in co-endemic areas. This study aims to achieve this objective by investigating the prevalence of babesiosis-related false diagnostics of malaria and assessing the clinician's knowledge and practices regarding malaria diagnosis in babesiosis co-endemic area.

The project will be a cross-sectional design study conducted in the Ngaoundere district (Adamawa Cameroon). The study will be organized into two activities: (i) recruitment and assessment of the knowledge and attitude of the clinicians (laboratory technicians and doctors) with regard to the differential diagnostics of the two parasites. This will be done using a semi-structured questionnaire administered to volunteers; (ii) the evaluation of the prevalence of misdiagnoses of malaria. This will be done by confirming the thick blood smears-based results by quantitative polymerase chain reactions targeting *babesia spp* on the suspected *Plamodium* infected slides. This project will provide the necessary evidence to adjust the diagnostic and therapeutic protocol for malaria in babesiosis co-endemic areas.