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From an early age, Abdou has always been passionate about infectious diseases. After completing his master's studies in parasitology, he broadened his knowledge and continued his education by enrolling in a PhD program in Virology. The highlight of this training was the research project he undertook under the supervision of Professor Njouom Richard at the Hepatitis laboratory at the Centre Pasteur du Cameroun. The project sought to determine the prevalence of hepatitis E, genetic diversity of the hepatitis E virus, and zoonotic transmission in Cameroon. Working within such a busy research team, Abdou was constantly exposed to the dynamic nature of scientific research and the need to read broadly to pick out information and optimize experimental protocols. It was a rewarding experience as he acquired new skills in research methodology, virology, serology, molecular biology, and biostatistics.

Furthermore, Abdou's research studies have been published in peer-reviewed journals, providing the first description of the prevalence and diversity of the hepatitis E virus in Cameroon and the risk of zoonotic transmission. This experience gave him the foundation and confidence to further his career in infectious diseases. He hopes to become an expert in viral hepatitis and to develop a research and training program on viral hepatitis. This proposed application builds on his current work on hepatitis E and enables Abdou to broaden his knowledge and research on other hepatitis viruses. The project addresses the growing need for hepatitis testing in Cameroon and beyond.

Project

Early and Accurate Diagnosis of Viral Hepatitis Using a Functional Laboratory Network and a New Molecular Assay

Executive Summary

This application supports Dr. Abdou Fatawou at the *Centre Pasteur du Cameroon* towards a productive research career on viral hepatitis. The proposed research seeks to increase access to viral hepatitis testing in Cameroon by 1) integrating viral hepatitis testing within the yellow fever virus surveillance network 2) developing a one-step multiplex real-time PCR assay to detect hepatitis A, B, C, D, and E. Through these studies, Dr. Fatawou will advance his training in basic and clinical research and develop expertise in molecular assay development.

Event/Program Purpose/Description

Viral hepatitis is a major global public health problem. About 325 million people worldwide are infected with one or more of the hepatitis viruses, and every day, about 3600 people die of viral hepatitis-related liver diseases (1). Fortunately, there is an effective hepatitis B virus vaccine and curative hepatitis C therapies. However, early diagnosis of infected individuals is still challenging: 9 out of every 10 persons with viral hepatitis are unaware of their status and remain undiagnosed, putting them at risk of unknowingly transmitting the virus. In addition, less than 5% of persons living with chronic viral hepatitis are aware of their status (2). This alarming gap in viral hepatitis testing prompted the World Hepatitis Alliance (WHA) to conduct a worldwide survey to identify barriers to diagnosing viral hepatitis (3). A key barrier identified was the lack of easily accessible testing for viral hepatitis (3). The lack of

accessible testing is particularly compounded in resource-limited settings such as Cameroon where viral hepatitis represents wide-ranging public health issues. In 2019, Cameroon reported 12,000 new cases of hepatitis B (4). Our studies and others have revealed a high prevalence of hepatitis C, D, and E viruses in Cameroon (5, 6).

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