

Crister José Ocadaque

Bandim Health Project, Guiné-Bissau

Crister José graduated in Medicine at the Federal University of Ceará (UFC). He completed a Medical Residency in Infectious Diseases at the Hospital São José of Infectious Diseases (HSJ). He holds a master's degree in medical microbiology from the Graduate Program in Medical Microbiology at the Department of Pathology and Legal Medicine at the Federal University of Ceará (2016), working in human virology with an emphasis on epidemiology and genetic mapping of respiratory viruses. Crister José also holds a PhD in Medical Microbiology from the Federal University of Ceará (UFC). He is currently an adjunct teacher of Infectiology and Molecular Biology at Center University Mauricio de Nassau (UNINASSAU). He has experience in medical infectiology, investigation, and medical clinic.

He is currently working as a senior researcher at the Bandim Health Project in Guinea-Bissau. Crister José is highly motivated in researching emerging and reemerging pathogens to know the epidemiology, seasonality, antimicrobial resistance, and virulence factors of bacterial, viral, and fungal pathogens of humans, animals, and zoonotic transmission of these pathogens in Guinea-Bissau. Dr. Crister is highly motivated to help his country by promoting science and STEM.

Project

Genetic Mapping and Seasonal of Viral Respiratory Infections in Paediatric Patients Attended at Simão Mendes Hospital in Guinea-Bissau

Acute respiratory infections (ARIs) are a public health problem for children around the world, particularly in developing countries including Guinea-Bissau, where morbidity and mortality rates range from 30% to 60% of ARIs. Among several causes that maintain undesirable rates of infant mortality in the country, we can mention acute respiratory infections (ARIs), represented mainly by pneumonia and bronchiolitis. Viruses stand out as agents of these infections, in the frequency that they cause them and in their diversity. These agents, especially the influenza virus (serotypes A and B), respiratory syncytial virus (RSV) and human parainfluenza (HPIV-1, 2, 3) are important as both causes of primary pneumonia and those that result in secondary bacterial infections. Different strategies should be used to prevent childhood ARIs, including the inclusion of vaccines in the children's vaccination schedule in Guinea-Bissau, as well as seasonally mapping the circulation of these viruses in different health areas of the country. Despite the great pathogenic potential of these viruses in the pediatric population, little we know about the clinical profile and seasonal circulation in Guinea-Bissau. Thus, this proposal aims to evaluate the clinical and epidemiological impact of these viruses on infant morbidity and mortality rates, as well as to mapping the seasonal circulation in Guinea-Bissau. For this, reference hospital (Simão Mendes Hospital) in Guinea-Bissau will be included. Clinical, epidemiological and virological data will be used at the time of information collection. Clinical samples collected from the study population during this period will be submitted to indirect immunofluorescence technique and subsequent real-time PCR for detection of viral RNA/DNA. Pyrosequencing will be used to genomic characterization of viral strains circulating in Guinea-Bissau and compare them to viruses from other geographic regions. Therefore, with the execution of this research project,

it is intended to contribute to a better understanding of the epidemiology circulation of respiratory viruses in the territory of Guinea-Bissau, by mapping the distribution of variants in different regions of the state. Additionally, this research proposes to carry out, for the first time, a genotypic evaluation of strains from Guinea-Bissau, through complete genome sequencing, which may contribute to a better understanding of the pathogenesis of these viruses. Understand the magnitude and prevalence of viral infection in the community; reuse this information to improve community infection control measures; understand the possible cross community/hospital transmission; propose the possible use of isolation protocols in hospital screening; scientific publication in high quality journals and training of human resources.