Short Communication

The Molecular Epidemiology Of Pneumocystis Jirovecii In Cape Town, South Africa

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Pneumocystis jirovecii (formerly Pneumocystis carinii) is a common, atypical opportunistic fungal pathogen, causing a severe, life-threatening disease called Pneumocystis pneumonia (PCP) in patient's immunosuppressed by HIV infection, malignancy, transplantation, or therapeutic immunosuppression (Saric et al., 1994; Aderaye et al., 2003). PCP is associated with substantial morbidity, and mortality rates range from 10% to 40%. The diagnosis of PCP relies on the microscopic detection of P. jirovecii in stained clinical samples. Polymerase chain reaction (PCR) may provide better sensitivity than microscopy; therefore, evaluation and implementation of PCR assays are required for the detection of Pneumocystis infection. P. jirovecii is not cultivatable, therefore molecular tools are used for characterizing P. jirovecii genotypes; common targets are the dihydropteroate synthase (DHPS) and mitochondrial large subunit rRNA (mtLSU rRNA) genes. DHPS is a therapeutic target; mutations may be associated with co-trimoxazole prophylaxis and treatment failure. Polymorphisms in mtLSUrRNA have been used for phylogenetic studies.

Biography

Mr DERRICK BANDA had completed his Master of Science Degree at the age of 31 years from Stellenbosch University, Faculty of Medicine and Health Sciences, Cape Town, South Africa. He is the Lecturer of Biological Sciences and Microbiology at Mulungushi University in Zambia.

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