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HIV diagnosis in the central African sub-region: The value of Viral diversity and false reactivity

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HIV diagnosis remains a challenge in the central African sub-region, partly due to false reactivity and an enormous viral diversity. Though HIV rapid tests are commonly used for diagnosis, fourth generation EIAs are progressively being introduced for HIV diagnosis and/or confirmation in reference laboratories. There is therefore a continuous need for field evaluations and routine validations of fourth generation HIV tests in central African populations. We evaluated the performance of a fourth generation EIA ARCHITECT HIV Ag/Ab kit (Abbott) in a population living in a central African setting-Cameroon compared to a population living in a European setting-France. A known HIV sero-negative panel as well as a sero-positive panel consisting of a diverse series of HIV-1 variants (groups M, N, O, and P) as well as HIV-2 samples was analyzed with the ARCHITECT HIV Ag/Ab kit. Results were compared to original diagnosis carried out with other fourth generation assays (AxSYM HIV Ag/Ab (Abbott) and Vidas HIV DUO QUICK) (bioMérieux). Sensitivity of the ARCHITECT was 100% in both sites. All HIV variants in the panel were diagnosed albeit with different reactivity profiles following strain diversity. A wider range of reactivity was observed for group O. Specificity was lower in Cameroon than in France. ARCHITECT HIV Ag/Ab assay had high performances in clinical sensitivity and specificity and is adapted to the wide genetic diversity of viruses circulating in West Central Africa. These data further highlight the need to evaluate HIV diagnostic tests before introduction into routine diagnostic services especially in the central African sub-region.

Biography

Anfumbom Kfutwah obtained a Ph.D from the University of Paris VII- Denis Diderot, and currently works for the Centre Pasteur in Yaounde- Cameroon. He is the head of the HIV laboratory which is one of the HIV reference centers in Cameroon. Dr Kfutwah has over ten years of experience working and collaborating with virology laboratories both in Cameroon and abroad. He has published more than 28 papers in reputed journals and serves as an editorial board member in some.

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