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Molecular characterization of HIV-1 Infection in Northeast of Brazil reveals the presence of rare subtypes and distinct BF recombinants forms

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The HIV-1 presents a high genetic variability owing to its mutation rates and huge amount of viral particle produced daily within infected cells. Majority of HIV-1 infections in Brazil are due to subtype B followed by BF recombinants and subtype C in the Southern region. According the Brazil's Ministry of Health, the Northeast region had one of the highest growth rates in the incidence of AIDS cases in the last ten years. Although this, little is known about the dynamic of HIV-1 infection in that region. In an attempt to evaluate the status of HIV-1 infection in the Northeast of Brazil we analyzed 64 polymerases (*pol*) sequences from individuals diagnosed between 2002 to 2003 and *pol* sequences from 105 persons diagnosed between 2007 to 2009. Samples were collected from adult individuals from Recife city (Northeast coast). Neighbor-joining and maximum likelihood trees were constructed and recombination analysis was done using Simplot software. We found that subtype B prevails (n=103, 60.9%) followed by subtype F (n=53, 31.4%), subtype C (n=2, 1.2%), one AG and one BC recombinants strains, and a variety of URFs BF (4.7%). We report here for the first time in Brazil the presence of HIV-1 subtype H. In conclusion, our results showed that HIV-1 infections in Recife (Northeast – Brazil) are mainly caused by subtype B. However, we found a high frequency of subtype F, greater than that observed in the southeast region of the country, beyond the detection of subtype C and BF recombinants.

Biography

Kledoaldo Oliveira de Lima, 33 years-old, Brazilian, performed his doctoral study at the Federal University of Pernambuco in cooperation with the Federal University of Pará, emphasizing the theme of the molecular epidemiology of HIV-1. He has published studies on the molecular epidemiology of HIV-1 and HIV-1 incidence with biomarkers and currently dedicated to bioinformatics. He works in Federal University of Pernambuco.

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