

# Epidemiological and Molecular Profile of Blood Donors Infected With HTLV-1/2 in the State of Pará, Northern Brazil

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## Research

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# Abstract

**Background:** The Human T Cell Lymphotropic Virus (HTLV) is a retrovirus of the genus Deltaretrovirus, which belongs to the family Retroviridae, and has tropism for T lymphocytes. This virus has four types, of which the most important in terms of pathogenesis and epidemiology are HTLV-1 and HTLV-2. It is estimated that between five and 10 million individuals are infected with HTLV-1, worldwide, of which, approximately 2.5 million live in Brazil. Studies in the state of Pará indicate that it has the third highest prevalence of HTLV infections of any Brazilian state. The virus can be

transmitted through sexual, vertical, and parenteral route. The present study describes the epidemiological, serological, and molecular profile of blood donors from the state of Pará, that were classified as unfit due to infection by HTLV-1 and 2.

**Results:** A total of 632 samples were analyzed. The HTLV proviral DNA was detected primarily in females (69.1%), with a mean age of 40 years, with the highest frequencies of detection being recorded in single individuals (66.2%), first-time donors (74.3%), and individuals that had graduated high school (44.1%). The molecular confirmation of HTLV showed that threequarters (78%) of the serologically reactive individuals were negative for either types I or II, so the epidemiological profile of these individuals was significantly different from their detectable profile.

**Conclusions:** The HTLV is a neglected etiological agent in Brazil, and although there have been many advances since its discovery, infection patterns are still relatively poorly understood by both healthcare professionals and the general population. There is thus a clear need for further research in the area of regional hemotherapy and hematology services, in order to contribute to the definition of regional infection profiles, that will be fundamental to the development of effective prophylactic practises for the prevention of the infection and the dissemination of knowledge on the dangers of HTLV in the community.

## Full Text

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