CO-INFECTION OF MONOCYTE HUMAN CELL LINE BY HIV AND LEISHMANIA: STUDIES ON INFECTIVITY AND PROLIFERATION

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Objective : HIV infection and Tropical diseases interactions are being studied by several epidemiological surveys. Actually, for Malaria, African and American trypanosomiasis interactions with AIDS have not been evidenced, while study of cases on leishmaniasis in HIV infected patients in Europe have revealed strong correlation between them. In this work, we study *in vitro* interaction between HIV-1 LAV strain and *Leishmania amazonensis* (MHOM/VE/76/JAP78) one of the causative agents of cutaneous leishmaniasis in Latin America.

Methods : A suspension of 5 x10^5 parasites free monocytes THP-1 was incubated with HIV-1 LAV strain. The viral concentration used was 2x10^4 cpm/ml of tritiated reverse transcriptase. Six days later when monocytes released viral particles, phorbol myristate acetate was added to plate the cells. Two days later, we have incubated these HIV-1 infected monocytes with *L. amazonensis* at the rate of 5 parasites per monocyte per well. Then, during 3 days HIV p25 and HIV reverse transcriptase were assessed. May Grünwald Giemsa staining method have been performed to observe infected cells.

Results : In the early phase of infection : 4 and 8 hours after infection by *Leishmania* of pre-infected cells (or not) by HIV show high degree of adherence to monocytes surface, later, at 48 hours after the infection by *Leishmania*, HIV-1 infected THP-1 cells, presents significant higher quantities of parasitophorous vacuoles than cells uninfected by retrovirus. Finally, at 72 hours after infection almost all the monocytes have lost their structure, showing nevertheless an important number of vacuoles and many of them are broken, in contrast with the cells which are only infected by HIV or only by *Leishmania*. Differentiated cells do not allow the assess of intracellular viral production.

Conclusion : We hypothetize that interaction between the retrovirus and parasite is *pro parte* traduced by a more intense multiplication of parasites in THP 1 cells. Actually works are in progress on circulating human monocytes. These reasearchs could help us to get a better understanding on the observed epidemiological facts.

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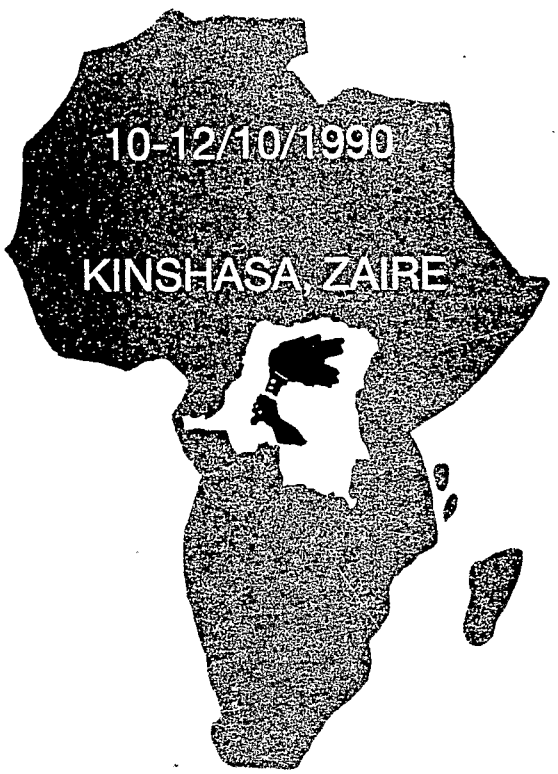

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