



POSTER PRESENTATION

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Detection and quantification of STLV-1 and SFV proviral load in blood and saliva of naturally infected non-human primates

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Simian T Lymphotropic Virus type 1 (STLV-1) and Simian Foamy Virus (SFV) retroviruses infect Old World non-human primates (NHP) and humans. Inter-human transmission has been described for HTLV-1 but not for SFV. SFV infection is asymptomatic in its hosts, while STLV-1 and its human counterpart HTLV-1 are the etiologic agents of Adult T-cell Leukemia/Lymphoma. Both STLV-1 and SFV can be zoonotically transmitted from NHP to humans through severe bites, thus involving contact between virus-containing saliva in the donor and blood in the recipient. Surprisingly, while the presence of both SFV RNA and DNA has been characterized into the saliva of NHP, neither STLV-1 DNA, nor STLV-1 RNA was quantified. Thus, the goal of our study was to search for STLV-1 provirus in the cells present in the saliva of NHP and then to quantify the proviral load of both viruses. We took advantages of a cohort of 45 papio anubis, naturally infected by STLV-1. We first assessed SFV infection and then potential SFV/STLV-1 co-infections. To this end, we designed semi-nested PCR and qPCR protocols (1) to diagnose infection and (2) to quantify STLV-1 and/or SFV proviral load in peripheral blood cells and in saliva. First, STLV-1 provirus was detected by semi-nested PCR in 8/10 blood samples tested, but only in the saliva of 1/10 NHP who had a high STLV-1 proviral load in peripheral blood cells. SFV DNA was detected by nested-PCR in blood samples from 10/10 baboons and in the saliva of 8/10 animals. A second study performed with 20 animals will be presented. We will show whether a correlation exists between blood and saliva STLV-1/SFV

proviral load and whether infection with one retrovirus impacts proviral load of the other. Altogether, our current results suggest that SFV is more frequently present in saliva than STLV-1. This should impact the ability of both viruses to be zoonotically transmitted through bites.

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