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## Detection of HERVs sequence in head and neck cancer patients in a public hospital (HBDF) in Brasilia, DF, Brazil

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**A**ctively replicative endogenous retroviruses (HERVs) are anciently integrated in the human genome and became stable in inherited material across generations, accounting for 8% of the human genome. Among HERVs group there are the HERV-K and HERV-W. HERV-K virions were seen budding from tumor cells, and viral RNA could be found at higher titers in the plasma of lymphoma and breast cancer patients. Reverse transcriptase and retroviral RNA were detected in plasma samples that simultaneously had HERV-K gag and env proteins, in both mature and pseudo particles. In light of these findings, we propose to initiate a study to evaluate the role of HERV-K among cancer patients in Brasilia, DF, Brazil. After the study approval (number 59/13) by the Committee of Ethics, under patients consent, blood samples and neoplastic tissue fragments were collected, in the surgery unit of the Hospital de Base do Distrito Federal. All the patients had cancer in

the neck or head. 35 extracted DNA samples from different histopathological types which were amplified with primers to the HERV-K gag region, and 31 samples yield an amplicon band size of 250 bp, as expected to the gag sequence. There are substantial reports in the literature of HERV-K proviral sequences detection among head and neck cancer and also in healthy tissues. Of 35 analyzed samples, 10 patients with oral squamous cell carcinoma were previously negative for the presence of human papillomavirus gene sequences, but had HERV-K sequences detected. Further analysis will investigate the presence of other HERV-K sequences as *env*, *pol* and *ltr*, in order to better understand the role of these entities in oncogenesis. Also the obtained amplicons will be sequenced and compared to published and deposited sequences.

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