Retrovirology



Poster presentation



# HIV-associated cellular proteins in human cervicovaginal lavage samples from HIV-negative women

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In a series of 20 women, HIV gag and env glycoproteins were detected by Mass Spectroscopy (MS) and confirmed by Western blot (WB) analysis in four women whose serum ELISA tests were HIV antibody negative. The presence of prostate-specific antigen in the CVL samples were analyzed by WB to determine whether the proteins might be from male deposition, and were found to be negative. We have no explanation at present for the finding of HIV proteins in these HIV seronegative women. MS data also identified the presence of albumin complexed with myristic acid in the CVL samples. Using immunoaffinity chromatography and Microcon YM-50 filters, the albumin in the CVL samples was removed and the fractions were analyzed by SDS-PAGE and WB analysis using a monoclonal anti-HIV-1 p24 antibody. HIV-1 p24 positive bands were seen only in albumin-conjugated fractions. N-myristoylation of the HIV-1 gag protein is necessary for efficient env protein transportation to the cell surface. Mutations blocking this modification lead to a failure of extracellular viral particle production. Moreover, maleylated human serum albumin is reported to inhibit HIV-1 infection and syncytia formation between HIV-1 and target cell in vitro. The association of HIV-1 p24 with albumin in CVL samples is currently being explored. Our data suggests that cellular albumin could be exploited as cellular target for HIV inhibition and in the development of new drugs.