

Poster presentation

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Anti-HIV activity of drugs that stimulate cholesterol efflux

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Background

HIV-1 infectivity depends on free cholesterol incorporated into the viral envelope. Here, we analyze HIV infectivity in the presence of drugs that stimulate cholesterol efflux.

Materials and methods

Human MDMs and human PBLs were isolated from healthy, HIV-negative donors and infected with different HIV-1 variants in the presence or absence of the LXR agonist TO-901317 or the PPAR gamma agonist Pioglitazone. Infectivity of the virus was measured by FACS using Ghost-Hi5 cells.

Results

TO-901317 inhibited the spread of HIV in MDM cultures by 90% at the peak dose (500 nM) and infection of PBLs by 70%. Pioglitazone inhibited HIV infection by 50% in both MDM and PBL cultures at 1 M. Analysis of HIV produced from cells treated with each drug showed reduced cholesterol content. Reduction in infectivity correlated with reduction of viral cholesterol. Therefore, drugs stimulating cholesterol efflux reduce HIV infectivity by targeting viral cholesterol.