

RelationsBetween Interferon α and p24 Antigen Level On Peripheral Blood ononuclear Cells (PBMC) Infected HIV-1

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Abstract : Background : The role of innate immunity in early HIV-1 infections is important to determine the next direction of the disease. At the beginning of the infection, inflammatory mediators such as interferon alpha, which is a type 1 interferon is a cytokine that is produced at the beginning of infection by infected cells and have the ability to inhibit the synthesis of viral proteins.

Objective: The purpose of this study was to observe the activity of interferon alpha in HIV viral replication in peripheral blood mononuclear cells (PBMC) were infected with HIV-1.

Methods: Samples are Peripheral Blood Mononuclear Cells (PBMC) of healthy people which cultured in RPMI 1640 medium equipped with 15% fetal bovine serum (FBS) and added with phytohemagglutinin (PHA) and incubated at 37°C and 5% CO₂. After a sufficient number of cells was 1x10⁶ cells / mL, the culture infected with the HIV-1 MT4 virus. After 7 days, we examined levels of IFN alpha and p24 HIV viral protein antigen.

Results: The correlation test between two variables using the Pearson correlation, the correlation coefficient interferon alpha is 0.354, this is a weak correlation level. Value significance is 0.178, where the value is >0,05, there is no significant relationship between the concentration of HIV-1 p24 protein in cell cultures with levels of IFN alpha.

Conclusion: in this study, the value of $p > 0.05$. Indicates that there is no significant correlation between the amount of HIV p24 antigen proteins with interferon alpha levels produced by the cells of PBMC infected with HIV-1 MT4.

Keywords : HIV virus, infection, interferon alpha, p24, PBMC.

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