Hindering HIV-1-fighting immune cells

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Immune proteins called HLA molecules help to activate killer T cell responses against pathogens. But according to a study that will be published online on December 14th in the *Journal of Experimental Medicine*, one particular group of HLA molecules cripples this activation, perhaps explaining why HIV-infected individuals who express these HLAs progress to AIDS more rapidly than others.

AIDS develops more rapidly in individuals who express HLA B*35-Px than in those who express the highly related HLA B*35PY proteins. The new study, lead by Xu Yu at Massachusetts General Hospital, shows that B*35-Px molecules bind to and activate an inhibitory receptor on dendritic cells—cells that are needed to activate protective T cells. These findings suggest that inhibitory dendritic cell receptors should be taken into consideration during future efforts to design HIV-1 vaccines and therapies.

More information: Huang, J., et al. 2009. J. Exp. Med. doi:10.1084/jem.20091386

Source: Rockefeller University (news : web)