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HIV/AIDS

Findings from Cornell University College of Medicine in HIV/AIDS Reported

2012 MAR 26 -- Investigators discuss in "a(1)Proteinase Inhibitor Regulates CD4 Lymphocyte Levels and Is Rate Limiting in HIV-1 Disease" new findings in HIV/AIDS. According to the authors of recent research from New York City, New York, "The regulation of adult stem cell migration through human hematopoietic tissue involves the chemokine CXCL12 (SDF-1) and its receptor CXCR4 (CD184). In addition, human leukocyte elastase (HLE) plays a key role." "When HLE is located on the cell surface (HLE(CS)), it acts not as a proteinase, but as a receptor for a(1)proteinase inhibitor (a(1)PI, a(1)antitrypsin, SerpinA1). Binding of a(1)PI to HLE(CS) forms a motogenic complex. We previously demonstrated that a(1)PI deficiency attends HIV-1 disease and that a(1)PI augmentation produces increased numbers of immunocompetent circulating CD4(+) lymphocytes," wrote C.L. Bristow and colleagues, Cornell University College of Medicine.

The researchers concluded: "Herein we investigated the mechanism underlying the a(1)PI deficiency that attends HIV-1 infection." Bristow and colleagues published their study in *Plos One* (a(1)Proteinase Inhibitor Regulates CD4 Lymphocyte Levels and Is Rate Limiting in HIV-1 Disease. *Plos One*, 2012;7(2):e31383). For additional information, contact C.L. Bristow, Weill Cornell Medical College, New York, New York, United States. Keywords: City:New York City, State:New York, Country:United States, Region:North and Central America, Immunology, Blood Cells, RNA Viruses, Retroviridae, HIV Infections, Vertebrate Viruses, Primate Lentiviruses, Enzymes and Coenzymes, Mononuclear Leukocytes, Hemic and Immune Systems, Viral Sexually Transmitted Diseases. This article was prepared by Stem Cell Week editors from staff and other reports.

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