

UCSF scientists find new facts about HIV

December 7 2005

University of California-San Francisco scientists have discovered how the human immunodeficiency virus can be kept dormant and hidden in immune cells.

The findings suggest new potential therapeutic approaches for viral eradication from infected patients, lead author Dr. Warner Greene, professor of medicine, microbiology and immunology, said.

Current combined antiviral therapies that target essential components of replicating HIV fail to achieve eradication of the virus from infected patients. That, said Greene, is due in part to the presence of rare cells harboring silent copies of the HIV virus -- a dangerous reservoir of literally "invisible" viruses that might potentially reactivate and seed a new infection.

Greene and colleagues report significant progress toward the understanding of the molecular mechanisms responsible for maintenance of HIV latency.

Specifically, the team demonstrated viral gene expression is actively repressed by the inhibitory NF-kappaB p50 protein. That inhibition is mediated by an enzyme called HDAC1, which is capable of shutting down gene expression in its vicinity.

The study is explained online in The EMBO Journal.

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