SOUTHWESTERN NEWS

Media Contact: Mindy Baxter
214-648-3404
melinda.baxter@utsouthwestern.edu

EMBARGOED UNTIL 1 P.M. CDT, WEDNESDAY, MAY 1, 2002

DRUG BREAKS FOR HIV-INFECTED INDIVIDUALS MAY PUT CERTAIN IMMUNE CELLS AT RISK

DALLAS – May 2, 2002 – Disruption of antiretroviral therapy by patients infected with HIV may be putting certain T-cells in their bloodstream at greater risk for infection with the deadly virus if it is allowed to rebound, a study in the May 2 issue of the journal *Nature* concludes.

Patients whose viral counts have fallen to nearly imperceptible levels sometimes interrupt antiviral therapy temporarily, re-starting treatment if viral levels rebound. Called structured therapy interruption, these drug breaks can increase the number of certain HIV-fighting T-cells, called CD8 T-cells, in the blood. Another type of T-cell, CD4, also plays an important role in fighting HIV.

Using data collected at UT Southwestern Medical Center at Dallas, researchers have found that, even though CD8 cells increase in number with interruption of therapy, HIV-specific CD4 cells appear to be particularly prone to infection by the virus during treatment interruption. Infections of CD4 cells hasten their destruction and help spread the disease to other cells in the body.

In time, as the patient's immune system is progressively weakened, this can give rise to full-blown AIDS, researchers say.

The patient can begin taking antiviral drugs to control the virus again, although this therapy is not a cure. It is unknown how long it takes for the body to regenerate these HIV-specific CD4 cells once the body's supply has become infected, or even if regeneration occurs with re-initiation of anti-viral treatment.

"During the treatment interruption, although HIV-fighting CD8 cells increase, HIV-specific CD4 cells also become infected if the virus is allowed to rebound," said Dr. Joseph Casazza, a co-author and assistant professor of infectious disease at UT Southwestern. "In effect,

(MORE)

by taking a drug break, you could be robbing Peter to pay Paul."

The lead authors of the study are Dr. Daniel C. Douek, a former faculty member at UT Southwestern, and Jason Brenchley, a graduate student in immunology at UT Southwestern. Both now work at the Vaccine Research Center at the National Institutes of Health in Bethesda, Md.

Researchers from Northwestern University Medical School in Chicago, Tel Aviv University in Israel and John Radcliffe Hospital in Great Britian also contributed to the study.

###