# HIV-related brain problems are studied

**Scripps Research Institute scientists have shed new light on the molecular basis of brain function problems associated with immune deficiency viruses.**

The La Jolla, Calif., researchers used viruses similar to the HIV, or human immunodeficiency virus, the cause of acquired immune deficiency syndrome, or AIDS. They said their findings may ultimately lead to new therapeutic interventions to prevent or reverse nervous system disorders in HIV-infected individuals.

Using multi-disciplinary analysis -- including cognitive, neurophysiologic, virologic, and molecular techniques -- the team found both a low-level viral infection in the brain as well as immune cells that had infiltrated the brain in order to protect against the virus.

"As in the rest of the body, in the brain immune cells achieve a level of control of the virus, but are unable to clear the infection," said lead author Howard Fox, an associate professor at Scripps Research and director of Scripps NeuroAIDS Preclinical Studies Center. "Over the long-term, this immune response may act as a double-edged sword, protecting against rampant viral replication in the brain, but leading to brain dysfunction."

The study appears in the Journal of Neuroscience.