

Study: The body forms viral 'highways';

February 21 2007

U.S. scientists say they have discovered some retroviruses induce cells to form long bridges along which virus particles can move.

Walther Mothes and colleagues at the Yale School of Medicine discovered the novel mode of cell-to-cell transmission used by three retroviruses -- murine leukaemic virus, human immunodeficiency virus and avian leucosis virus -- along the outside of long, thin intercellular bridges.

Those bridges, say the scientists, seem to be stabilized by an association between a viral protein expressed by the infected cell and a viral-receptor protein in the target cell. Mutants of those proteins that cannot interact destabilize the bridges and markedly reduce viral spreading from cell to cell.

The researchers say that mode of transmission is observed in a variety of different cells, suggesting it might be a general mechanism of viral spreading.

The research appears in the March issue of *Nature Cell Biology*.

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