Feline Favors

The common house cat might hold the key to an HIV vaccine.

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Scientists recently discovered that a protein from a virus that causes AIDS in cats also sparks T cells in the blood of HIV-positive people to defend against the virus. Researchers from the University of Florida and the University of Southern California, San Francisco now believe they may be able to produce a vaccine based on T cells to fight HIV infection and help the body build up an immunity to the disease.

T cells, which are part of our immune system, attack cells infected with viruses and trigger our body's immune system to fight disease. A T-cell-based HIV vaccine would work much like other vaccines that are produced by using weakened strains of a germ. In theory, scientists believe the vaccine would cause the body to produce compounds called viral peptides that can induce T-cell activities to destroy HIV.

"Surprisingly, we have found that certain peptides of the feline AIDS virus can work exceptionally well at producing human T cells that fight against HIV," says Janet K. Yamamoto, PhD, a professor of retroviral immunology at the University of Florida College of Veterinary Medicine, and one of the study's authors.

Researchers believe that by studying the feline immunodeficiency virus (FIV), scientists may be able to identify regions of the human immunodeficiency virus (HIV) that they could designate as targets for a potential vaccine.

Scientists say the study's finding is important because the resemblance of FIV to HIV allows researchers to make important observations about T-cell reactions to the virus.

This isn't the first time researchers considered creating a T-cell-based vaccine. In previous studies, scientists combined a variety of HIV proteins to create a vaccine. But none of these combos worked.

Cats and humans are staying tuned. Why? Because the vaccine wouldn't just defend people against HIV, it would also help cats fend off the virus.