

Scientists probe how some HIV patients resist AIDS

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Electron micrograph of the human immunodeficiency virus (HIV-1).
Photo: U.S. Centers for Disease Control and Prevention

Understanding immune response in these 'elite controllers' might help pave way to vaccine.

(HealthDay)—Researchers who discovered an immune system mechanism that seems to provide some people with a natural defense against HIV say their finding could help efforts to develop a vaccine for HIV/AIDS.

In most people, [HIV infection](#) without treatment almost always progresses to AIDS. But about one in 300 HIV-infected people remain AIDS-free without having to take medications. These people are called "elite controllers."

After conducting experiments with laboratory animals, the researchers concluded that elite controllers suppress HIV by generating a powerful CD8+ T killer [cell response](#) against just two or three small regions of the virus.

"By focusing on these selected regions, the immune response successfully controls the virus," David Watkins, a professor of pathology at the University of Miami Miller School of Medicine, said in a university news release.

"Understanding this mechanism may shed light on

how to develop an effective vaccine to eradicate the global HIV/AIDS crisis," he added.

Scientists, however, note that research with animals often fails to provide similar results in humans.

The study was published Sept. 30 in the journal *Nature*.

The next step is to determine why these particular [killer cells](#) are so effective, Watkins said.

Watkins and his colleagues recently received a \$10 million grant from the U.S. National Institute of Allergy and Infectious Diseases to develop an [HIV vaccine](#) from the yellow fever vaccine.

More information: The U.S. Centers for Disease Control and Prevention has [questions and answers about HIV/AIDS](#).

[Abstract](#)
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