HIV-Specific Poison May Complement ARVs

January 10, 2014

A study conducted in mice has shown that a toxin engineered to target HIV can eliminate infected immune cells in which the virus is replicating despite antiretroviral (ARV) therapy. This finding suggests that the toxin, called 3B3-PE38 and developed in 1998 in NIH labs, may one day serve as an adjunct to ARVs.

Publishing their findings in PLOS Pathogens, researchers at the University of North Carolina and the National Institutes of Health (NIH) took 40 mice with bioengineered human immune systems and infected them with HIV. Several months later, the mice received a combination of ARVs for four weeks, after which point half of them were given two weeks of 3B3-PE38 in addition to the ARVs and the other half just received the ARVs.

When compared with the control group, those who received the HIV-specific toxin saw a significant drop in both the number of HIV-infected cells producing virus in various organs and in blood viral load.

The researchers speculate that using 3B3-PE38 as a complement to ARVs may one day help people living with HIV achieve a sustained disease remission—either controlling or eliminating the virus without the need for indefinite ARV treatment.

To read the NIH release, click here.

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