



Mouse Study Reveals Promising HIV Functional Cure Treatment

The researchers studied a new compound that blocked a key viral protein that prompts infected cells to produce more virus.

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Scientists have developed a new means of suppressing HIV-infected cells from producing new virus that, with more research, may eventually lead to a means of functionally curing the virus.

Publishing their findings in *Cell Reports*, researchers studied what they called a “block-and-lock” approach to attempting a functional cure of HIV. Ideally, this method blocks latently infected (unreplicating) cells from reactivating, even after interrupting daily antiretroviral (ARV) treatment. Consequently, HIV would not be gone from the body, but rendered into a permanently silent state as it remained in cells that did not start replicating again and producing new viral copies.

The investigators studied a compound that is a derivative of a natural compound called didehydro-Cortistatin (dCA). The dCA compound blocks a viral protein called Tat that operates as a kind of off-on switch for infected cells; when triggered, Tat spurs an infected cell into replication and the production of new virus.

The scientists studied a month of dCA treatment along with standard ARV treatment in mice engineered to provide a model in which to study latently infected HIV and its persistence.

Following the interruption of all treatment, the mice treated with just ARVs experienced viral rebound after an average of seven days, while the average corresponding interval for those that also received dCA was 16 days.

In theory, longer treatment with dCA would create a longer delay in the viral rebound. The researchers theorize a permanent prevention of viral rebound is possible. They are researching to determine what is likely the required dCA treatment length to yield such success.

To read a press release about the study, [click here](#).

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