Antifungal Drug Shows Promise Fighting HIV in the Lab

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The topical antifungal agent Ciclopirox eradicates HIV by promoting infected cells to effectively commit suicide, and it does not lead to viral rebound after the therapy is stopped, according to U.S. News and World Report. Reporting their findings in PLOS ONE, researchers studied how, in a laboratory setting, Ciclopirox affected HIV-infected H9 cells and peripheral blood mononuclear cells infected with clinical HIV isolates.

One of the reasons HIV manages to endure in the body even in the face of antiretroviral (ARV) therapy is because the virus blocks cells' natural mechanism for instigating their own demise in the event they are damaged or infected. The scientists found that Ciclopirox fought the virus by inhibiting the expression of certain HIV genes and also interfering with the cells' mitochondria, undoing HIV's inhibition of the suicide mechanism.

Uninfected cells were not affected by the treatment. Also, once Ciclopirox was terminated, the virus did not rebound as it would after stopping ordinary ARVs.

Because Ciclopirox is already approved by the Food and Drug Administration as an antifungal, the process of moving into human trials for an HIV-fighting capacity should be much more efficient. There is a possibility the drug may prove useful as a topical application to reduce the risk of sexual transmission of the virus.

To read the U.S. News article, click here.

To read the study, click here.

To read a release on the study, click here.