

Researchers make HIV wake up call

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Melbourne researchers have made a breakthrough in the search for an AIDS cure.

Researchers have moved a step closer to finding a cure for HIV by successfully luring the 'sleeping' virus out of hiding in infected cells.

New research has shown how the cancer drug vorinostat is able to 'wake up' the sleeping virus that silently persists in patients on standard [HIV treatment](#), by altering how [HIV genes](#) are turned on and off.

Professor Sharon Lewin, head of Monash University's Department of Infectious Diseases, Director of the Infectious Diseases Unit at the Alfred Hospital, and co-head, Centre for Virology at the Burnet Institute

in Melbourne, said the results from the trial were promising and would inform further studies in the quest to cure HIV.

"We know the virus can hide in cells and remain out of reach from conventional HIV therapies and the immune system," Professor Lewin said.

"Anti-[HIV drugs](#) are unable to eradicate the virus because it burrows deeply into the DNA of [immune cells](#), where it gets stuck and goes to sleep. Anti-HIV drugs are very effective in keeping people healthy but they can't eliminate virus that is sleeping.

"We wanted to see if we could wake the virus up – and using vorinostat we have successfully done that."

Twenty HIV-positive patients in Victoria were the first in the world to participate in the trial of vorinostat.

"This is a very important step but the results of the trial have raised further questions.

"We've shown we can wake up the virus – now we need to work out how to get rid of the infected cell. A kick start to the immune system might help," Professor Lewin said.

"We have an enormous amount still to learn about how to ultimately eradicate this very smart virus."

In 2012, Professor Lewin and her team first uncovered how the virus, which currently infects more than 30 million people world wide, hides dormant in infected cells, out of the reach of [conventional treatments](#) and the immune system.

The research was presented at the [20th Annual Conference on Retrovirus and Opportunistic Infections in Atlanta](#).

Provided by Monash University

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