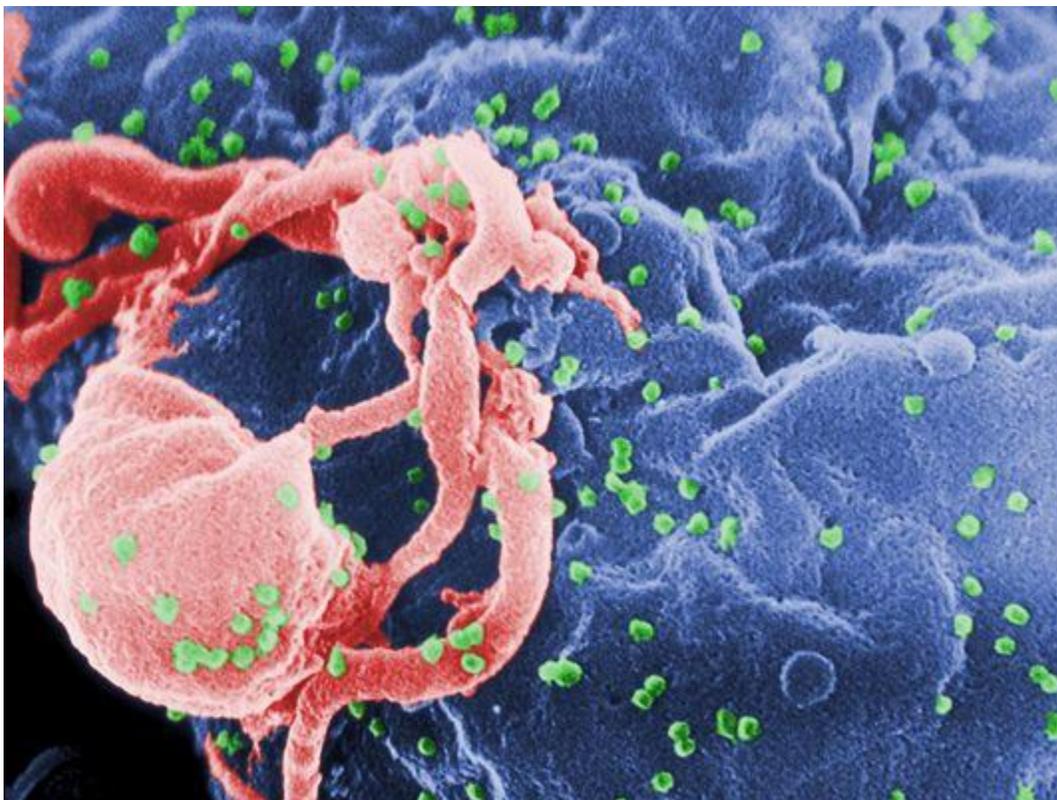


## AIDS cure trial planned as French teen indicates HIV remission



### The experiment will cost \$5 million and could start next year with more than 100 patients

A French teenager has been effectively cured of AIDS, showing no signs of active infection a dozen years after stopping treatment -- a development that is helping spur the largest trial ever aimed at curing patients of HIV.

The French girl, whose case was presented at an AIDS meeting in Vancouver on Monday, was infected at birth and treated until she was about six years old. Doctors then lost track of her for about a year, and her parents stopped the therapy for unknown reasons, said Francoise Barre-Sinoussi, who won a Nobel Prize in 2008 for her co-discovery of HIV as the cause of AIDS.

When the girl was next seen by a doctor, the virus was not running rampant in her blood as would normally be expected in a person who had stopped treatment. Doctors decided to monitor her and only resume therapy if the virus rebounded. She's now 18, and while the virus is still detectable, it's lying dormant and doesn't require drugs to keep it subdued.

"This case is clearly additional evidence of the powerful benefit of starting treatment as soon as possible," Barre-Sinoussi said on a call with reporters before the findings were presented.

Drugs made by Gilead Sciences and GlaxoSmithKline can reduce the virus that causes AIDS to undetectable levels but don't completely clear it. The virus hides out in reservoirs in the body, avoiding eradication by the medications -- and usually comes roaring back if treatment is stopped. But scientists hypothesize that early and aggressive use of such drugs can prevent the virus from gaining a foothold, allowing them to stop treatment.

The teenager is similar to a group of 14 French adults described in a 2012 study. They were all treated soon after infection, and have shown no signs of the virus after being taken off therapy. Together, the cases indicate a way to keep HIV at bay without the side effects and costs associated with lifelong treatment.

Researchers now aim to replicate those results on a grander scale. They say they will attempt to batter HIV into submission with treatment initiated shortly after infection, then interrupt the regimen to see whether the virus returns. The experiment will cost about \$5 million and could start next year with more than 100 patients, said Steve Deeks, the trial leader and a professor of medicine at the University of California, San Francisco.

"Ultimately we can achieve a functional cure in these individuals who start therapy very early," Deeks said. "It's going to be far easier to do than to take a typical person who's got a ton of virus, been infected for a long time, and try to cure them."

The proposed trial would monitor patients closely and put them back on medications at the first sign of the virus rebounding, Deeks said. The earliest that the study might yield results would be 2018.

"What the field needs to do next to confirm this is real is to interrupt therapy in a controlled manner in a large number of individuals and see what happens," Deeks said.

The study highlights the shifting approach to AIDS treatment. In the early years of the epidemic, most people infected with HIV died within two years. After tailored "cocktails" of antiretroviral drugs were approved in 1996, the deadly virus became an ailment that could be managed with long-term therapy. While early treatments required multiple pills several times a day, drugs such as Gilead's Atripla have reduced it to a single daily tablet.

Glaxo's ViiV Healthcare unit is working on long-acting drugs that could be taken just once a month. And researchers at the National Institutes of Health are developing experimental antibodies that might control HIV by boosting the immune system with injections just two or three times a year. A small study presented on Saturday showed such antibodies cut levels of the virus by more than 90 percent.

The advances in treatment are emboldening scientists to say a cure is within reach -- which is increasingly attracting investment. Gilead is in early human testing of a drug designed to flush out the reservoirs of HIV as part of an attempt to rid the body of the virus in what scientists call a "sterilizing cure."

Glaxo in May said it would invest \$20 million in cure research via Qura Therapeutics, a joint venture with the University of North Carolina at Chapel Hill. Like Gilead, it would use one drug to rouse the latent pockets of virus, then another to kill them when they emerge.

Anthony Fauci, director of the U.S. National Institute of Allergy and Infectious Diseases, cautions that HIV researchers have long been disappointed by false hopes. He noted that a year ago, a toddler in Mississippi relapsed after more than two years off therapy.

"Remember we called the Mississippi baby functionally cured," Fauci said. While the French teenager's 12-year remission is "pretty good," he hesitated to say she had been cured.

Still, more than 30 years after AIDS was first observed, scientists are increasingly optimistic about taming the virus. While completely conquering the infection remains a distant aspiration, it's possible to blunt its threat, said Barre-Sinoussi.

"We have more and more data indicating that perhaps we will never be able to eradicate HIV from the body," she said. "But remission is certainly an achievable goal."