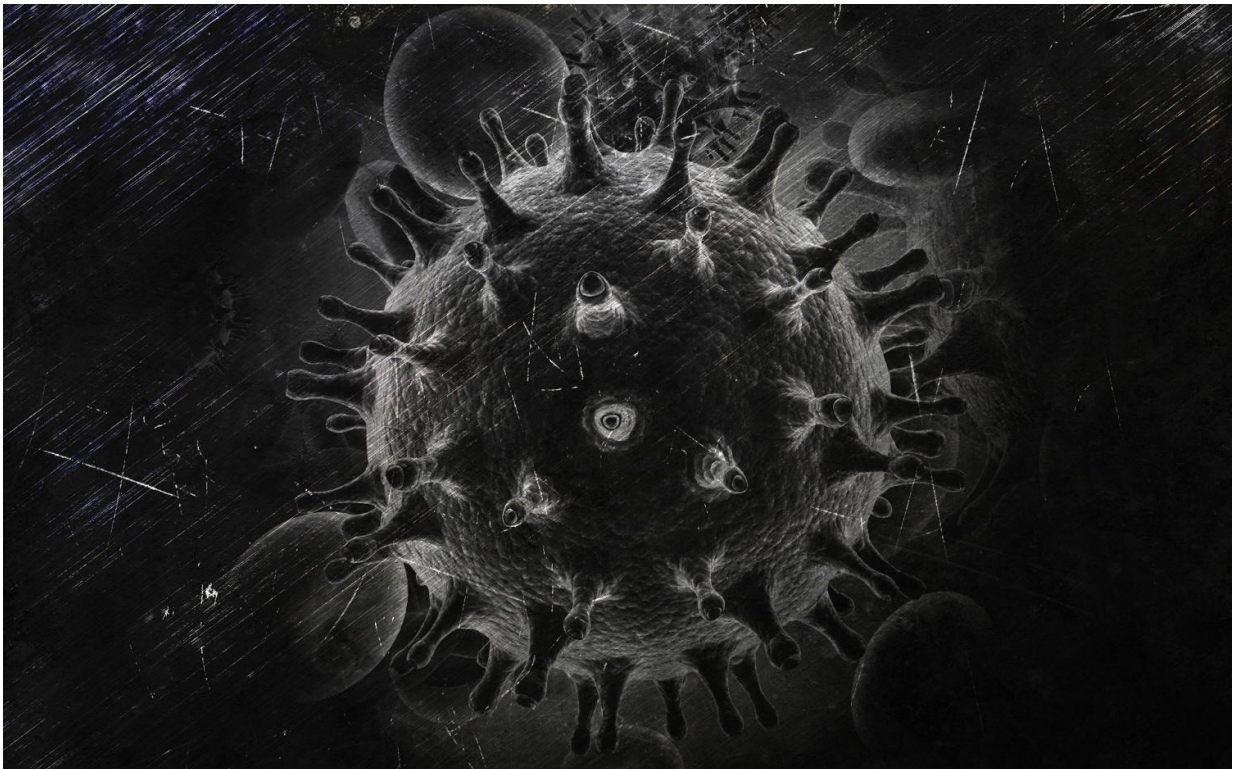


# Scientists report setbacks in quest for AIDS cure

July 24 2018

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Scientists reported setbacks Tuesday in the quest for an AIDS cure, and highlighted concerns about inconclusive evidence linking a promising new HIV drug to birth defects.

According to research presented at the 22nd International AIDS Conference in Amsterdam, four cases of "neural tube" defects were recorded among the pregnancies of 426 HIV-positive women in Botswana who took the drug dolutegravir before conception.

Neural tube defects cause severe brain and spinal deformities in the first weeks after conception, and often lead to stillbirth.

The cases amount to a ratio of nearly one defect per 100 pregnancies, compared to the rate in the general population of about one per 1,000, researcher Rebecca Zash of the Harvard TH Chan School of Public Health explained.

The defects were observed between August 2014 and May this year.

There have been no new reports among 170 dolutegravir pregnancies monitored since, but Zash said, "I don't think we can take much reassurance" from that.

Four birth defects in 596 pregnancies was "still seven times higher than other groups, and statistically significant", she added.

Dolutegravir is a relatively new HIV-suppressor with fewer side-effects, and is thought less likely to spark drug resistance in patients.

Countries targeted by the US PEPFAR AIDS relief fund were on the cusp of rolling it out as the leading antiretroviral therapy (ART), International AIDS Society president Linda-Gail Bekker told AFP.

## **Waiting game**

Botswana was the first country to introduce dolutegravir as a first-line antiretroviral drug for all who need it, including women of child-bearing

age.

"This puts a very definite bump in the road," Bekker said, adding that conference organisers "scurried" to organise last-minute sessions to discuss the consequences of the Botswana results.

Pending clarification, global health agencies have advised HIV-positive women planning a family to use other antiretrovirals instead.

"I wish so badly that this (data) signal would go away" with further research, Zash told AFP.

In the meantime, "it's tough, but I think we just have to wait" for more information.

On the cure front, there was bad news too.

A trial to test a new strategy to "kick" the AIDS-causing HIV virus out of its hiding place in human cells, then "kill" it, yielded a disappointing outcome.

Researchers tested the effects of several medicines on top of standard ART in a trial with 60 HIV-positive men.

Volunteers received two vaccines meant to coach the body's immune system to recognise HIV, and another drug to "wake up" the reservoir cells hiding the virus, allowing it to be attacked by the body's own defences.

But trial participants who received these drugs had no different outcome to those on standard ART, said Sarah Fidler, a professor of HIV medicine at Imperial College London who took part in the research.

"Of course the overall effect wasn't what we would hope for, but it was definitive," she told journalists in the Dutch capital.

"All results move the knowledge forward even if they're somewhat disappointing."

For scientists, "cure" means weakening HIV to a point where it poses no harm to the infected person and cannot be transmitted to others—allowing people to stop treatment without any risk.

## **'Very difficult challenge'**

"A cure remains a top scientific priority," said researcher Sharon Lewin of the Peter Doherty Institute for Infection and Immunity at the University of Melbourne.

However, "what we've learnt, I think over the last decade: this is going to be a very difficult scientific challenge."

In another potential setback, a Thai study concluded that a type of "feminising hormone" used by transgender women appears to lower the concentration of a virus-repressing drug, tenofovir, in the blood.

This did not necessarily mean that hormone therapy renders the virus-repressing drug less effective, said Akarin Hiransuthikul of the Thai Red Cross AIDS Research Centre.

But further research is needed to unlock the potential repercussions.

There was some encouraging news too.

Updated findings in an ongoing study found zero infections among uninfected men in relationships with HIV-positive men who use virus-

suppressing drugs.

Another study provided further evidence that "on-demand" use of antiretrovirals, pre- and post-sex, appears to work as a means of infection prevention.

And new data in the APPROACH vaccine study among nearly 400 HIV-negative adults, showed an immune response was still present 78 weeks after a fourth dose, though this does not yet constitute evidence that it works.

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Citation: Scientists report setbacks in quest for AIDS cure (2018, July 24) retrieved 26 April 2024 from <https://medicalxpress.com/news/2018-07-scientists-setbacks-quest-aids.html>

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