
Shot in the arm: Australian HIV treatment shows early promise

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Australian researchers have released the results of an early trial of an [experimental](#) [1](Of a drug) Not licensed for use in humans, or as a treatment for a particular condition. Experimental drugs are studied in clinical trials to determine their safety and efficacy, and are sometimes made available via Special Access Schemes prior to their approval. vaccine which shows promise as a treatment for HIV. The results are considered significant partly because previous attempts to develop a therapeutic HIV vaccine have mostly been abandoned due to poor outcomes.

But the Australian-developed VIR201 candidate vaccine now seems likely to go into further trials to determine what, if any, role the treatment could have in the future.

The results were presented by Professor David Cooper of the National Centre in HIV [Epidemiology](#) [2]The branch of medical science that deals with the study of incidence and distribution and control of a disease in a population. and [Clinical](#) [3]Pertaining to or founded on observation and treatment of participants, as distinguished from theoretical or basic science. Research at the 11th Conference on Retroviruses and Opportunistic Infections, held in San Francisco in February.

Developed by the Melbourne-based biotechnology company Virax Holdings, VIR201 is designed to re-stimulate the body's natural immune response to HIV.

The idea behind the vaccine is that if you stimulate the immune system in the right way, you may be able to encourage the body to produce its own responses to HIV infection, limiting the need for [antiviral](#) [4]A medication or substance which is active against one or more viruses. May include anti-HIV drugs, but these are more accurately termed antiretrovirals. treatment. When a person is initially infected with HIV, their immune system generates a variety of responses to fight the virus, including specific cells which can identify and kill HIV-infected cells. But the capacity of the body to keep responding strongly against HIV wanes over the first few months of infection, and antiviral drugs are then usually needed to control the replication of HIV.

Researchers from the National Centre in HIV Epidemiology and Clinical Research tested the vaccine in a small group of 35 recently HIV-infected people, all of whom had well-controlled virus. All participants in this study had undergone HIV seroconversion within the previous six months. Participants received three injections of the candidate vaccine.

The initial trial found that the vaccine had no adverse effects and appeared to be safe in this group, but it did not seem to generate the sorts of immune system responses researchers had hoped to see ??? indications that the immune system had been stimulated by the vaccine.

Twelve months after the initial trial, participants were invited to enter an extension study, with 25 of the original group receiving a fourth injection of either the vaccine, the vaccine plus an additional component (which it was hoped would add to the capacity to stimulate immunity), or a [placebo](#) [5]A dummy medical treatment, designed to have no pharmacological effect, administered to the control group of a clinical trial.. They then ceased all antiviral treatment so the effect of the vaccine in controlling HIV could be measured.

On analysis, people who had received the vaccine appeared to control HIV better than those who had received only the placebo. While the results were encouraging, they were not statistically significant ??? which means that the researchers could not be certain that the results were due to the vaccine and had not occurred by chance.

Nonetheless, the researchers are pleased with this result, which they said is ?striking, and warrants further development.?

Researchers are puzzled as to why the vaccine appears to help control HIV, despite demonstrating none of the usual laboratory signs of generating an immune response against the virus.

It is the hope of researchers involved in the study that these intriguing results can be further investigated, and that

they may lead to an approach to HIV treatment which does not require the use of antiviral therapy every day.

- [therapeutic vaccines](#)

Links:

[1] <http://www.napwa.org.au/glossary/term/491>

[2] <http://www.napwa.org.au/glossary/term/490>

[3] <http://www.napwa.org.au/glossary/term/475>

[4] <http://www.napwa.org.au/glossary/term/123>

[5] <http://www.napwa.org.au/glossary/term/106>