

Headline **Significant progress made towards AIDS vaccine**
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Significant progress made towards AIDS vaccine

WASHINGTON: After decades of trying to develop a vaccine against AIDS, global health authorities are finally beginning to make "significant advances" towards their goal, Anthony Fauci, head of the US institute of infectious diseases, told AFP.

"Up to a few years ago, even though we have been trying for a couple of decades to develop a vaccine, unsuccessfully, we have not even had a small clue that we were going in the right direction," Fauci told AFP.

But two key events that have taken place in the past few years have changed that and led to "significant advances in the development of a vaccine," said Fauci, who is head of the National Institute for Allergy and Infectious Disease (NIAID).

The first of those key turning-point events was a clinical trial of an HIV/AIDS vaccine which was conducted last year in Thailand on 16,000 people.

"The results showed a small to modest positive effect on the acquisition of HIV - not good enough to be able to distribute a vaccine but good enough to tell us that it was a conceptual advance that at least makes us feel now that a vaccine is possible," Fauci said.

Then, last week, scientists at NIAID published a paper in the journal *Science* about research that had helped them to identify two antibodies in an HIV-positive individual, which, when put together "block 90 percent" of HIV strains, Fauci said.

"What that is telling us is that you can identify the portion of the virus

What is HIV/AIDS?

HIV: human immunodeficiency virus

HIV found in blood, semen, vaginal secretions, breast milk

▶ Attacks the immune system by invading white blood cells known as CD4+ T cells

▶ Normal CD4+ T cell count at 800-1200/mm³

AIDS: acquired immunodeficiency syndrome

▶ Final stage of HIV infection

▶ Occurs when CD4+ T cell count drops below about 200/mm³

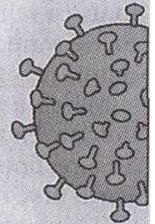
AFP Sources: CDC/WHO/UNAIDS

Transmission

- ▶ Unprotected sex
- ▶ Shared drug syringes
- ▶ From mother to child
- ▶ Blood transfusions

Toll

- ▶ 2 million deaths a year, 25 million killed since discovery of disease in 1981
- ▶ 22.4 million infected in sub-Saharan Africa
- ▶ 33.4 million people living with HIV
- ▶ 2.7 million new infections a year



that you would like to use as a vaccine, because we know that when the antibodies bind to that portion, it knock down the virus," he said.

The next step will be to try to inject that part of the virus into an individual to produce a protective response against HIV infection, said Fauci in an interview with AFP days before the 18th international conference on AIDS, to be held in Vienna, Austria.

The Thai study and the report in *Science* have left scientists feeling "much more confident that ultimately we will have a vaccine" against HIV/AIDS, although it was still impossible to say exactly when that would be, said Fauci.

An AIDS vaccine was probably several years away, which means that in the meantime, the fight against HIV/AIDS must continue to focus on prevention and use tried and true tactics such as condom distribution, male circumcision,

blocking mother-to-baby transmission and offering syringe exchange programs, he said.

Ways have to be found, too, to improve access to these preventive measures, especially in developing countries where only 20 percent of "populations who would benefit" actually have access to them, he added.

Along with improving access to the preventive methods, Fauci urged global health authorities and governments to continue to work to develop other forms of prevention, such as microbicides.

And he recommended "treating as many people as we possibly can because we know that when you treat more people, you lessen the probability that they would infect other people.

"You could almost have what we call treatment as a form of prevention," until a vaccine is finally developed, said Fauci. - AFP