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Novel HIV vaccine trial starts at Oxford

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The University of Oxford today started vaccinations of a novel HIV vaccine candidate as part of a Phase I clinical trial in the UK.

The goal of the trial, known as HIV-CORE 0052, is to evaluate the safety, tolerability and immunogenicity of the HIVconsvX vaccine—a mosaic vaccine targeting a broad range of HIV-1 variants, making it potentially applicable for HIV strains in any geographical region.

Thirteen healthy, HIV-negative adults, aged 18-65 and who are considered not to be at high risk of infection, will initially receive one dose of the vaccine followed by a further booster dose at four weeks.

The trial is part of the European Aids Vaccine Initiative (EAVI2020), an internationally collaborative research project funded by the European Commission under Horizon 2020 health programme for research and innovation.

Professor Tomáš Hanke, Professor of Vaccine Immunology at the Jenner Institute, University of Oxford, and lead researcher on the trial, said: "An effective HIV vaccine has been elusive for 40 years. This trial is the first in a series of evaluations of this novel vaccine strategy in both HIV-negative individuals for prevention and in people living with HIV for cure."

While most HIV vaccine candidates work by inducing antibodies generated by B-cells, HIVconsvX induces the immune system's potent, pathogen obliterating T cells, targeting them to highly conserved and

therefore vulnerable regions of HIV—an "Achilles heel" common to most HIV variants.

Dr. Paola Cicconi, Senior Clinical Research Fellow at the Jenner Institute, University of Oxford, and the trial Chief Investigator, said: "Achieving protection against HIV is extremely challenging and it is important that we harness the protective potential of both the antibody and T cell arms of the immune system."

At present, prevention of HIV largely focuses on behavioural and biomedical interventions such as voluntary medical male circumcision, condom use, and anti-retroviral drugs used prior to exposure.

Professor Tomáš Hanke said: "There is strong evidence that undetectable HIV viral load prevents sexual transmission. Nevertheless, the pace of decline in new HIV infections failed to reach the Fast-Track Target agreed upon by the United Nations General Assembly in 2016: fewer than 500,000 new infections per year in 2020.

"Even in the broader context of increasing antiretroviral treatment and prevention, an HIV-1 vaccine remains the best solution and likely a key component to any strategy ending the AIDS epidemic."

The researchers hope to be able to report results of the HIV-CORE 0052 trial by April 2022.

There are also plans to start similar trials in Europe, Africa and the US.

Provided by University of Oxford