
NON-TECHNICAL ABSTRACT OF THE STUDY

Human Immunodeficiency Virus (HIV) is a virus which has the ability to invade and damage cells of the immune system. It infects and kills that specific group of white blood cells called CD4⁺ T cells. The result of this loss is a serious disabling of the body's immune system, leaving the infected individual open to infections and cancers.

The body also has specific white blood cells known as cytotoxic T lymphocytes (CTL), that function as important killers of cells infected with viruses. HIV-infected individuals who are in an early stage of disease and who are symptom-free could theoretically benefit from a treatment that stimulates these CTL.

Scientists have recently developed a way to insert new genetic information into human cells through use of a disabled virus, called a retroviral vector. The retroviral vector has been designed such that it cannot reproduce to cause disease, but delivers to target cells the genetic codes for the production of certain proteins that resemble important proteins of HIV. The retroviral vector instructs the human target cells to produce such therapeutic proteins. These proteins can then lead to enhanced immune responses targeted at killing HIV-infected cells.

Experiments in mice and non-human primates have shown that treatment with these specific retroviral vectors can stimulate the production of HIV-specific antibodies and CTL without producing any toxic side effects.

This study is designed to determine the safety of the retroviral vector encoding HIV genes for use in humans, and, of secondary importance, whether the vector will have the ability to trigger CTL responses in humans as it does in laboratory animals.