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## Mutant DNA latest in AIDS arsenal

**C**ALIFORNIA biotechnology company Sangamo BioSciences Inc said recently it would start human testing of a new approach to treating the AIDS virus that involves deliberately damaging the patient's DNA.

The approach is based on research that has long shown that people with a certain mutation in a gene called CCR5 resist infection with the fatal and incurable virus.

The gene controls a doorway

called a receptor in immune system cells. The human immunodeficiency virus uses the CCR5 receptor to latch onto the cells it infects.

Sangamo's drug SB-728-T disrupts CCR5. It is a zinc finger nuclease — a compound that can slice open molecules.

This one is specifically designed to disrupt CCR5. The com-

pany plans to remove immune cells called CD4 T-cells from HIV patients, treat them with the drug and re-infuse them.

The hope is these damaged cells will thrive and multiply and give the patient an immune system resistant to HIV.

"This is the first time that we have had the ability to make a patient's T-cells permanently re-

sistant to infection by CCR5-specific strains of HIV and we are very excited to begin a clinical trial of this novel zinc finger nuclease-based therapy," said Dr Carl June of the University of Pennsylvania School of Medicine, who will help test patients.

"The ability to protect immune cells from infection with HIV and the expansion of CCR5-modified

T-cells has the potential to provide long-term control of both the virus itself and eventually the opportunistic infections characteristic of AIDS," said June.

In November, German researchers reported that a bone marrow transplant to replace the immune system of an HIV patient with leukaemia not only treated his cancer, but appeared to have suppressed the AIDS virus as well. The transplant was from a donor who had the CCR5 mutation. — Reuters