HIV-1 vaccine development: Pinning down a moving target

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HIV-1 is a genetically diverse collection of viruses, making it a moving target in vaccine development.

In a study published in the Journal of Clinical Investigation, researchers led by Brad Jones at the University of Toronto in investigated the feasibility of eliminating HIV-infected cells by targeting cellular immune responses against a human endogenous retrovirus (HERV).

HERVs are the DNA remnants of ancient infectious retroviruses that became part of the germ line cells of our ancestors.

Jones and colleagues found that HIV infection stimulated the expression of HERV proteins, effectively tagging HIV-infected cells.

Immune cells targeted to these proteins specifically eliminated cells infected with several different strains of HIV in vitro. This study suggests that HERV-targeted immune responses should be considered in the development of HIV vaccines.

More information: HERV-K-targeted T-cells eliminate diverse HIV-1/2 and SIV primary isolates, *Journal of Clinical Investigation*, 2012.

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