

## Gene-based stem cell therapy specifically removes cell receptor that attracts HIV

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UCLA AIDS Institute researchers successfully removed CCR5 — a cell receptor to which HIV-1 binds for infection but which the human body does not need — from human cells. Individuals who naturally lack the CCR5 receptor have been found to be essentially resistant to HIV.

Using a humanized mouse model, the researchers transplanted a small RNA molecule known as short hairpin RNA (shRNA), which induced RNA interference into human blood <u>stem cells</u> to inhibit the expression of CCR5 in human immune cells.

The findings provide evidence that this strategy can be an effective way to treat HIV-infected individuals, by prompting long-term and stable reduction of CCR5.

The results are being published in *Blood*, Journal of the American Society of Hematology.

Provided by University of California - Los Angeles

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