

# New research advances potential HIV cure strategy

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Published in the *Journal of Infectious Diseases*, new [research](#) led by the University of Minnesota Medical School offers a new avenue of hope in the fight against chronic human immunodeficiency virus (HIV) infection.

The researchers explored the use of Natural Killer (NK) cells aiming to restore their function for better infection control—an approach that could be used in a broader HIV cure strategy as multiple companies are working on mass production of healthy NK cells.

"HIV has really excellent therapies thanks to the unprecedented progress in developing [antiretroviral therapy](#), but even with that, the disease still causes early mortality and significant medical problems, and a cure is desperately needed," said Tim Schacker, MD, the principal investigator and program director in HIV Medicine at the U of M Medical School.

NK cells are a frontline defense against [viral infections](#). HIV can disable these cells, making it difficult to clear the infection. The [research](#) involved providing HIV-positive individuals with an infusion of healthy NK cells obtained from a close relative along with the drug N-803 from ImmunityBio, which enhances NK activity. All participants in this early-stage study experienced a marked decrease in the burden of infection, and the procedures were found to be safe and well-tolerated.

While acknowledging the high cost and limited scalability of this approach for the over 35 million infected people worldwide, the study offers important insight into possible cure strategies by demonstrating that enhancing NK cell function can substantially reduce HIV burden.

The research team plans a larger study combining NK cells with N-803 plus an HIV-specific broadly neutralizing antibody—similar to what was successfully used to treat COVID-19—to determine if the combination can lead to even further reductions in the burden of infection and get us another step closer to curing HIV.

**More information:** Jeffrey S Miller et al, Safety and Virologic Impact of Haploidentical NK Cells Plus Interleukin 2 or N-803 in HIV Infection, *The Journal of Infectious Diseases* (2024). [DOI:](#)

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Provided by University of Minnesota Medical School

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