Cure: CCR5 Gene Therapy Milestone

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For the first time, scientists have proved that it is possible to engineer immune cells to control HIV for an extended period of time without the need for ongoing antiretroviral (ARV) therapy. The genetic therapy in question focuses on the CCR5 coreceptors on the surface of CD4 cells, onto which HIV latches so it can infect the cell. Researchers at Sangamo BioSciences removed blood cells from people with HIV who were born with one non-functional version of the two genes that express the CCR5 coreceptors. After knocking out the other CCR5-expressing gene, the researchers reinfused the genetically engineered cells into the body. Three out of seven study participants who qualified for the evaluation of the study achieved an undetectable viral load during an interruption of their ARVs—two of them for a transient period of time, and one for 20 weeks at last report. The treatment also elevated CD4 levels and led to a drop in a key indication of the viral reservoir.

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http://beta.docker.poz.com/article/gene-therapy-milestone-25035-2019