Gene Therapy Controls HIV Longer Than Four Months in Study

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Sangamo Biosciences' efforts to develop genetic therapies for HIV have had some early success, with two of three participants in one cohort maintaining control of the virus for an extended period during which they were not taking standard antiretroviral (ARV) treatment. The biotech company is conducting a Phase I/II study, known as SB-728-1101, of its genetic treatment, called SB-728-T. Updated results about what is known as Cohort 3 of the trial were presented at the 2015 Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC) in San Diego, California.

Cohort 3 includes three HIV-positive participants who received a genetic treatment in which their own CD4 and CD8 immune cells were drawn out, genetically modified to resist HIV, and then infused back into their bodies. This treatment was different from what was given to other participants in the study because it included modified CD8 cells instead of just modified CD4s. All of the study participants received a treatment called Cytoxan preconditioning before they received the modified cells in order to prime the body to better accept the immune cell infusion.

After undergoing the genetic treatment, the members of Cohort 3 all stopped taking ARVs. Two of them have maintained control of HIV for longer than 16 weeks.

"The ability of subjects treated in Cohort 3 to suppress and sustain control of viral load, combined with durable increases in CD4 and CD8 cells, provide support for our hypothesis of an immunologic mechanism of action for SB-728," Dale Ando, MD, Sangamo's vice president of therapeutic development and chief medical officer, said in a press release. "The prolonged positive effects observed in these Cohort 3 subjects have not been seen before with other treatments and have encouraged us to enroll and treat an additional five subjects with this regimen."

To read a press release about the study, click here.