

Can Cancer Meds Play a Role in an HIV Cure? These Researchers Aim to Find Out

Three HIV cure researchers were awarded amfAR grants. Two will examine cancer drugs; a third will genetically engineer B cells.

July 30, 2024 By [Trent Straube](#)

Three HIV scientists exploring potential [HIV cures](#) received grants totaling \$1.2 million from [amfAR, the Foundation for AIDS Research](#). All three will focus on ways to eliminate the so-called [HIV reservoir](#), where latent virus hides out, even when people are on successful treatment and their viral load is undetectable. (If treatment is stopped, the virus rebounds and begins its damage.)

Two researchers will investigate cancer meds that have been approved by the Food and Drug Administration (FDA) that may have anti-HIV properties; a third will examine genetically engineered B cells.

“These three projects are a reminder of the extraordinary ability of HIV to evade every attempt—other than a highly invasive stem cell transplant—to dislodge it from the reservoir,” said amfAR CEO Kevin Frost [in a press statement](#). “We believe they will yield important new insights that bring us closer to a cure for all who need it.”

“It’s no coincidence that two of these studies will test the effectiveness of FDA-approved cancer treatments for their anti-HIV activity,” added amfAR senior scientific consultant Jeffrey Laurence, MD. “Time and again, we see parallels between HIV and cancer, and we hope the successful outcomes of these studies will lead to clinical benefits for people living with HIV.”

The grant recipients are:

Michael Peluso, MD, of the University of California, San Francisco

Peluso and his team received a \$480,000 grant to study the bladder cancer drug N-803. N-803 is 25 times more potent than its natural immune hormone counterpart, IL-15, which has known anti-HIV activity, reports amfAR, noting that the drug also stimulates natural killer cells and T cells. The theory is that N-803 can stop HIV from rebounding once treatment is stopped. This is the first trial

to test this idea in humans.

Adam Spivak, MD, of the University of Utah, Salt Lake City

Spivak is researching the cancer drug dasatinib, a type of chemotherapy often used to treat leukemia. Spivak and his team will use their \$480,000 grant to determine whether dasatinib can successfully reduce the size of the HIV reservoir.

Yiming Yin, PhD, of Boston Children's Hospital

With a \$240,000 grant, Yin and her team will test the hypothesis that certain B cells could replace antiretroviral therapy and reduce the size of a person's HIV reservoir. B cells are white blood cells that play a vital role in the immune system; they express antibodies capable of broadly neutralizing HIV variants. Yin "will genetically engineer B cells with the ability to target three critical portions of the HIV envelope," amfAR explains. "Monkeys will be given these cells and then immunized with an mRNA vaccine expressing the HIV envelope; the function of those B cells will be assessed. Yin hopes to determine whether the B cells can suppress rebound of the HIV relative, simian-human immunodeficiency virus (SHIV), in SHIV-infected monkeys following treatment interruption."

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