

Positive Results

A small HIV vaccine study yields interesting findings.

June 5, 2017 By Joe Mejía

Thirty-plus years into the HIV epidemic, there is still no cure for the virus. For one, it mutates often and quickly, evading treatment. Further, when people with HIV are on antiretroviral medications (ARVs) with undetectable viral loads, the virus remains dormant in parts of the body, creating viral reservoirs where the virus can't be treated until prompted to reproduce. Still, scientists continue to work toward a functional cure to keep the virus suppressed without medications, which, though highly effective, cause side effects and are costly.

At this year's Conference on Retroviruses and Opportunistic Infections in Seattle, Beatriz Mothe, of the IrsiCaixa AIDS Research Institute in Barcelona, presented the results of BCN02, a clinical trial in which she and her team gave multiple doses of the HIV Conserv vaccine plus the drug romidepsin to 13 HIV-positive participants who had started taking ARVs within six months of infection and had been on them an average of 3.2 years. This intervention had helped keep the virus undetectable and—researchers hypothesized—their viral reservoirs small.

Within four weeks, the virus rebounded in eight of them, and they resumed their ARV treatment. But the other five, or 38 percent, have gone between (at press time) six and 28 weeks without having to restart treatment. This is notable because previous studies on treatment interruptions found that only 10 percent of individuals are able to control their infections for more than four weeks. However, much more follow-up is needed before these individuals are considered functionally cured.

The vaccine, which contains a form of the virus that does not mutate, allows the body's immune response to become more efficient and stronger. Likewise, romidepsin—the drug used along with the vaccine—stimulates bursts of viral production in the reservoirs, “waking up” the virus, which helps focus and further strengthen the body's immune response.

Though the study was small and there was no control group, the National AIDS Trust says it shows the potential of a therapeutic vaccine “to keep the virus under control” in people already living with HIV.