TuSalud

NIH and Gates Foundation Each Pledge $100M for HIV and Sickle Cell Cures

Last year, the federal agency invested nearly $300 million in the search for HIV cure therapies.

October 28, 2019 By Benjamin Ryan

The National Institutes of Health (NIH) and the Bill & Melinda Gates Foundation have announced that they will each invest $100 million in new funds toward research into genetic therapy to cure HIV and sickle cell disease over the next four years.

Both diseases disproportionately affect people in Africa, and a key goal of the new investments is to develop treatments that can be provided affordably in poorer nations.

“This unprecedented collaboration focuses from the get-go on access, scalability and affordability of advanced gene-based strategies for sickle cell disease and HIV to make sure everybody, everywhere has the opportunity to be cured, not just those in high-income countries,” NIH director Francis S. Collins, MD, PhD, said in a press release. “We aim to go big or go home.”

The goal of this joint effort is to advance safe, effective and long-lasting gene-based cures for HIV and sickle cell disease into clinical trials in the United States and various sub-Saharan African nations within seven to 10 years.

Both the Gates Foundation and NIH will continue to invest in cures for both diseases outside of this new research collaboration.

According to AVAC’s most recent report on global HIV cure funding, in 2018, the NIH invested $276 million in this arena while the Gates Foundation contributed $6.4 million. The largest non-NIH funder of HIV cure research last year was amfAR (The Foundation for AIDS Research), which contributed $10.9 million.

Together, non-pharmaceutical-industry global funding for HIV cure research reached $324 million

in 2018, which represented a 12% increase over the 2017 figure and a 3.7-fold increase over what was invested in 2012.

The NIH's own new investment in such research comes on the heels of the Trump administration's backing of the NIH-designed plan to ramp up efforts to combat HIV in the United States during the 2020s. The first year of funding for the plan is awaiting approval from the Senate.

The reason the NIH and the Gates Foundation are looking at both HIV and sickle cell disease in this new collaboration is because research into genetic treatments should provide common benefits for both diseases. HIV cure research in particular will investigate means of targeting the viral reservoir—the amorphous collection of cells harboring virus that stay under the radar of standard antiretroviral treatment.

"In recent years, gene-based treatments have been groundbreaking for rare genetic disorders and infectious diseases," said Trevor Mundel, MD, PhD, president of the global health program at the Gates Foundation. "While these treatments are exciting, people in low- and middle-income countries do not have access to these breakthroughs. By working with the NIH and scientists across Africa, we aim to ensure these approaches will improve the lives of those most in need and bring the incredible promise of gene-based treatments to the world of public health."

Any investigational treatments for either disease will be administered within the body, known as in vivo. This is opposed to ex vivo treatments, in which, for example, stem cells are drawn from the body of a person with HIV, edited to make them resistant to the virus and transferred back into the body. That process is much more complex and therefore more expensive—likely prohibitively so in poorer nations.

"This collaboration is an ambitious step forward, harnessing the most cutting-edge scientific tools and NIH's sizable global HIV research infrastructure to one day deliver a cure and end the global HIV pandemic," said NIAID director Anthony S. Fauci, MD. "We are taking into account those with the greatest need at the foundation of this effort, to ensure that, if realized, this exceptional public health achievement will be made accessible to all."

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