$3.5M in amfAR Grants Goes to HIV Cure Research

The 13 new grants support innovative approaches such as gene therapy.

August 2, 2017

More than $3.5 million in new grants from amfAR, The Foundation for AIDS Research, is going to scientists seeking a cure for AIDS. Specifically, the grants will support innovative approaches to eliminate the reservoirs of HIV not cleared by antiretroviral therapy; these reservoirs are considered the main barrier to finding a cure for the virus.

According to amfAR's press release, the grants represent the latest investments in the foundation's Countdown to a Cure for AIDS initiative, aimed at developing the scientific basis of a cure by the end of 2020.

Through the amfAR Research Consortium on HIV Eradication (ARCHE), a program that fosters collaboration among teams of scientists, more than $2.3 million in grants was awarded to seven teams of researchers working on gene-therapy-based approaches to curing HIV.

Gene therapy offers the possibility of manipulating DNA as a means of attacking infected cells that make up HIV reservoirs and of enhancing the ability of the immune system to attack or block the virus. As simple as it sounds, there are still a number of risks and challenges. Scientists need to find ways to improve the efficiency of appropriately altering DNA, effectively target the correct cells and enable the therapy to safely persist long enough to have an effect.

The researchers will pursue projects aimed at designing and refining vectors (the means by which genes are delivered to cells to alter them) that can accurately target the cells that make up the reservoir and regions using so-called CAR-T cells, which have shown promise in clearing some types of cancer, as a potential means of killing HIV-infected cells.

According to the press release, these grantees include:

- Hildegard Büning, PhD, of Hannover Medical School in Hannover, Germany
- Keith Jerome, MD, PhD, of University of Washington in Seattle

- Hans-Peter Kiem, MD, FACP, of Fred Hutchinson Cancer Research Center, Seattle
- Scott Kitchen, PhD, of University of California, Los Angeles
- Yasuhiro Takeuchi, PhD, of University College London, United Kingdom
- Drew Weismann, MD, PhD, of University of Pennsylvania, Philadelphia
- Richard Wyatt, PhD, of The Scripps Research Institute in La Jolla, California

In a second round of grants, amfAR awarded $1.2 million to six researchers who will explore mechanisms of HIV persistence and the potential for HIV eradication. These researchers include:

- Andrew Badley, MD, of the Mayo Clinic College of Medicine in Rochester, Minnesota
- Joshua Schiffer, MD, of Fred Hutchinson Cancer Research Center in Seattle
- Andrew Henderson, MD, of Boston University School of Medicine in Boston
- Fabio Romerio, PhD, of the University of Maryland, Baltimore
- Brad Jones, PhD, of The George Washington University, Washington, DC
- Benjamin Burwitz, PhD, of Oregon Health and Science University in Portland

So far, amfAR has awarded $42 million in Countdown grants to support research conducted by more than 222 scientists working at 74 institutions in 10 countries around the world.

Kevin Frost, amfAR's chief executive officer, said finding a cure is possible; as proof, he point to the case of Timothy Ray Brown, also known as the Berlin Patient, the only person known to have been cured of HIV. "Curing HIV is no longer a pipe dream," Frost stated in the press release. "However, several complex scientific challenges remain, and these new grants reflect amfAR's determination to pursue a range of strategies to overcome them."

Rowena Johnson, amfAR's vice president of research said the two rounds of grants will get to the heart of the scientific challenges they face in search for a cure. "Through these projects," Johnson said, "we will continue to forge the scientific alliances within HIV and beyond, that we believe are our best hope for accelerating progress toward a cure."

To read articles in POZ about the Berlin Patient, click here. And for more about cure research, click here.