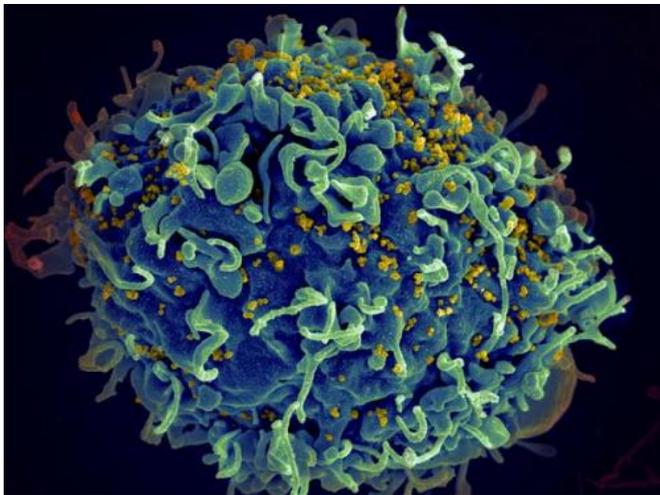


HIV reservoirs remain obstacles to cure

19 May 2015



HIV, the AIDS virus (yellow), infecting a human immune cell. Credit: Seth Pincus, Elizabeth Fischer and Austin Athman, National Institute of Allergy and Infectious Diseases, National Institutes of Health.

Antiretroviral therapy (ART) has proven lifesaving for people infected with HIV; however, the medications are a lifelong necessity for most HIV-infected individuals and present practical, logistical, economic and health-related challenges. A primary research goal is to find an HIV cure that either clears the virus from an infected person's body or enables HIV-infected individuals to suppress virus levels and replication to extremely low levels without the need for daily ART.

In a new perspective article in *Nature Immunology*, National Institute of Allergy and Infectious Diseases (NIAID) Director Anthony S. Fauci, M.D., and colleagues describe how persistent HIV reservoirs form in the human body and why they pose formidable challenges to achieving a cure. Additionally, the authors discuss the current therapeutic research strategies aimed at eliminating or controlling the virus without daily ART, including making CD4+ T cells resistant to HIV and enhancing host immunity against infection. A better understanding of persistent viral

reservoirs and the impact of therapeutic interventions on these reservoirs is essential to the development of successful therapeutic strategies aimed at the long-term control of HIV infection, according to the authors.

While recent scientific advances and increased funding aimed at developing therapeutic strategies toward an HIV cure have yielded valuable insights into the pathogenesis of HIV-related disease, achieving an HIV cure remains extremely challenging, the authors note. However, recent advances give cause for hope. Attaining a [cure](#) will require strong and sustained efforts to better understand the establishment, composition, maintenance, and renewal of HIV [reservoirs](#), according to the authors.

More information: T-W Chun, S Moir, and AS Fauci. HIV Reservoirs: Obstacles and Opportunities for an HIV Cure. *Nature Immunology* DOI: [10.1038/ni.3152](https://doi.org/10.1038/ni.3152) (2015).

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