

# A potential target for HIV reactivation discovered



With nearly 35 million people affected with AIDS worldwide, there have been continuous efforts and funding towards finding an effective treatment for this burdening disease.

In the 18th May 2016 edition of *Nature*, scientists may be one step closer to discovering a cure. Researchers in this study revealed that HSF1, heat shock factor 1, is actively involved with the reactivation of viral HIV strains in latent phases of infection. Previously, very few studies have found cellular factors associated with activation of HIV in latent stages. In order to identify the role of HSF1, scientists used chromatin immunoprecipitation (ChIP) assays to visualize the attachment of HSF1 to the promoter of the HIV strain during reactivation, as well as positive transcription elongation factor b (p-TEFb) assisting in its function. In addition to p-TEFb, p300 is recruited by HSF1 for self-acetylation during latent stages of infection. The overexpression of HSF1 provides strong support for its role in HIV reactivation.

The authors conclude that “....the promotion of HSF1 activation might be an appropriate solution to antagonize provirus, resulting in the development of a cure for AIDS.” The challenge will be to translate these findings to the clinic.

[Pan, X. et al, 2016. Heat Shock Factor 1 Mediates Latent HIV Reactivation. \*Scientific Reports\*.](#)

*Article Review by Braden Kenny, an intern from the University of Toronto*