

# Host protein levels correlate with HIV-associated neurocognitive disorder

September 9 2014

---

Combination antiretroviral therapy has dramatically increased the life expectancy for HIV-infected patients. However, the prevalence of HIV-associated neurocognitive disorders, which may be triggered by inflammation in the central nervous system, has substantially risen.

A new study in the *Journal of Clinical Investigation* suggests that a host protein, heme oxygenase-1, is protective against HIV-associated inflammation and [cognitive decline](#). Dennis Kolson and colleagues at the University of Pennsylvania determined that heme oxygenase-1 levels are low in brains of HIV infected patients.

In HIV infected individuals, heme oxygenase-1 deficiency correlated with cognitive decline and viral load in the brain. In a cell culture model, inhibition of heme oxygenase-1 increased [viral load](#) and promoted neurotoxicity. Increasing expression of heme oxygenase-1 in the same model decreased both viral burden and neurotoxic effects.

The results of this study suggest that strategies that increase heme oxygenase-1 may protect patients from HIV-associated neurocognitive disorders.

**More information:** Heme oxygenase-1 deficiency accompanies neuropathogenesis of HIV-associated neurocognitive disorders, *J Clin Invest.* [DOI: 10.1172/JCI72279](https://doi.org/10.1172/JCI72279)

Provided by Journal of Clinical Investigation

Citation: Host protein levels correlate with HIV-associated neurocognitive disorder (2014, September 9) retrieved 19 April 2024 from <https://medicalxpress.com/news/2014-09-host-protein-hiv-associated-neurocognitive-disorder.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.