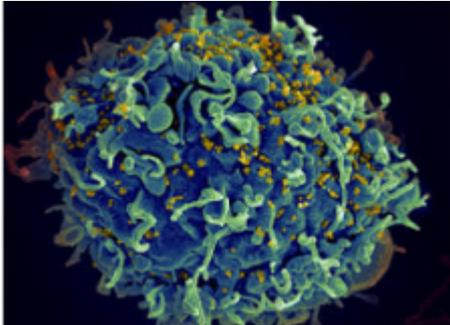


Sorry, AIDS Deniers, It's Only a Headline



By Josh Bloom — August 28, 2015



The (thankfully small) subset of loons that are also known as

"AIDS Deniers" (those that reject the overwhelming and irrefutable evidence that HIV is the causative pathogen of AIDS) must have been overjoyed to see the news today. Some of the headlines seem to suggest, at least upon first glance, that what these ostriches believed might have been right all along.

Not so fast. These headlines lack the word "directly," which changes the meaning entirely. HIV does cause AIDS, but it needs a little help from the immune system to do the job properly. This "job" is to make the infected cells "misbehave." Although the mechanism by which they do this has just been elucidated, in a sense HIV isn't acting all that much differently from the way that other viruses do. Although influenza can be a fatal disease, it is not the virus that actually does the killing but rather, it is the immune system of the host that does much of the dirty work.

In response to the flu virus, proteins called cytokines are released from the infected cells. The cytokines attack the virus, but in doing so, cause a massive inflammatory response in the body of the host. When this process goes awry, a condition called a cytokine storm can occur. This overreaction is responsible for *direct* deaths from the virus, often because it leads to a buildup of fluid in the lungs. Indirect deaths are usually due to secondary infections, such as pneumonia.

There is a similar, but different interaction between HIV and the immune system. As [reported](#) ^[1] in the journal *Cell Reports*, the HIV particles alone do not play a direct role in destroying the immune system. Rather, they cause a particular component of the immune system called CD4 T cells to act up, and this is what spreads the infection from cell to cell. Once HIV enters these cells, it falls apart leaving its components in the infected cell. The viral DNA then triggers an inflammatory response, and the cell bursts open, which not only releases new viral particles, but inflammatory proteins, which propagate the infection.

There is nothing earth-shattering here. While a better understanding of the mechanism of may lead to new therapies, HIV still causes AIDS, just like it always has. It just does it a little differently than we originally thought.

Source URL: <https://www.acsh.org/news/2015/08/28/sorry-aids-deniers-its-only-a-headline>

Links

[1] [http://www.cell.com/cell-reports/abstract/S2211-1247\(15\)00882-7](http://www.cell.com/cell-reports/abstract/S2211-1247(15)00882-7)