

AIDS resistance secret may be in blood

12 February 2007

U.S. scientists say the absence of a specific marker in the blood and tissues of certain monkeys might be part of the key to understanding AIDS resistance.

Tulane University pathologist Ivona Pandrea and colleagues are investigating why monkeys infected for years with simian immunodeficiency virus, the primate version of the human immunodeficiency virus, never develop AIDS.

The team compared blood, lymph nodes and intestines of five primate species that do not develop AIDS when infected with SIV with tissues of species that do develop AIDS as a result of SIV or HIV infection.

She analyzed the presence of CCR5, an important marker found on CD4 cells, which are part of the immune system targeted by HIV and SIV. As the viruses kill the CD4 cells, AIDS develops. CCR5 allows the virus access to those cells.

Pandrea found the AIDS-resistant monkeys had fewer CD4 cells with CCR5 on them than the comparison group. She theorized the absence of CCR5 is due to the adaptation of AIDS-resistant monkeys to SIV infection over millennia, while the others only recently have been exposed to SIV or HIV so they haven't developed resistance.

The study appears in the journal *Science*.

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APA citation: AIDS resistance secret may be in blood (2007, February 12) retrieved 5 September 2022 from <https://medicalxpress.com/news/2007-02-aids-resistance-secret-blood.html>

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