



Protein Shakers

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Proteins aren't important just in your diet. More than 100,000 of them help your body's cells do what they do—and some are providing the basis for future HIV meds.

Researchers recently identified 273 proteins that HIV uses as stepping-stones to infect and reproduce in the body. Once scientists ID them, they can study each protein to see how it enables the virus. Meet three that have been getting attention—and learn how they can help you.

Name: CCR5

Job: Acts as a lock on immune cells that HIV must pick before entering

Drug Contribution: Helped produce entry-inhibitor HIV meds, which block CCR5 so the virus can't get into a T cell

Name: APOBEC3G

Job: Can protect immune cells from infection--provided that an HIV protein ("vif") doesn't interfere

Drug Contribution: Understanding APOBEC3G's natural HIV-fighting ability--and its interaction with vif--may produce a slew of new drugs.

Name: P13K/Akt

Job: Runs a pathway in cells that prevents infected ones from self-destructing (for your body to heal, this cellular suicide is necessary)

Drug Contribution: Has already helped produce a drug that allows parasite-infected cells to die off. That drug, miltefosine, is being studied to see if it will work against HIV, too.

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<http://beta.dockert.poz.com/article/HIV-enabling-proteins-14385-6653>