AAT Ease

Wouldn’t it be poetic justice if the blood in which HIV swims turned out to be the source of a major new weapon against it?

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Wouldn’t it be poetic justice if the blood in which HIV swims turned out to be the source of a major new weapon against it? That’s what Leland Shapiro, MD, and a band of researchers at the University of Colorado Health Sciences Center in Denver have found. The trick comes in the form of alpha-1 antitrypsin (AAT), a blood protein that keeps HIV from reproducing and infecting healthy cells. When Shapiro & co. found that HIV does not grow in blood samples, their search for why led them to AAT, a natural inhibitor of serine proteases in the blood. Turns out the virus replicates like crazy in blood taken from people whose AAT levels are reduced due to a genetic defect. The researchers propose that although most people’s bodies do contain the protein, HIV gets around it by reproducing in areas such as the lymph glands, where AAT levels are low. Researchers suggest two possible therapies: injections that might *increase* its level at the sites where HIV normally grows; and a synthetic serine protease inhibitor that mimics AAT’s effects. New Jersey-based Cortech Inc. has developed it, and -- even easier to swallow -- their product might be useable in pill form. Preliminary but promising, the findings led scientists to call for more research into serine protease inhibitors. And that’s where it’s AAT for now.

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