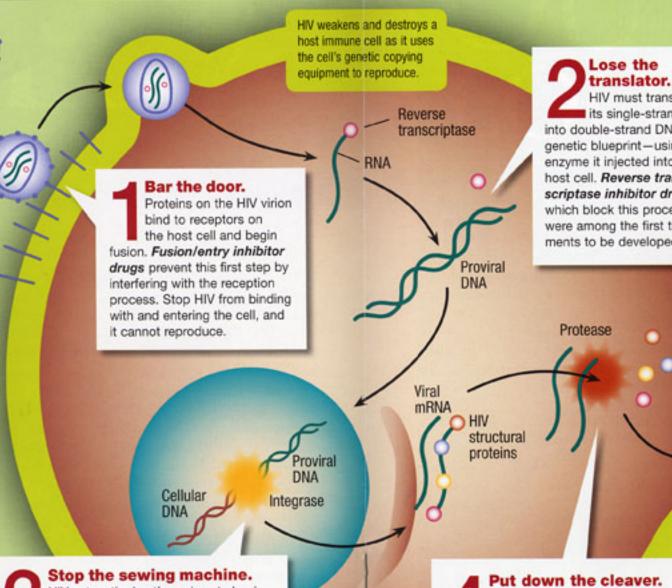


Inhibiting -

One of the world's deadliest health problems attacked from all fronts at the School of Medicine

n more ways than one, "HIV becomes part of the person," says David B. Clifford, MD. The virus sews its genetic material into the host's DNA and takes over a life. A lifetime of treatment awaits a roller-coaster ride of drug therapies while monitoring the virus' quantity within the body. Although it has become possible to stave off rampant cellular death and weakening of the immune system, the psychological, physical and financial tolls remain high. Researchers continue to examine all aspects of HIV in search of ways to mitigate its destructive effects.





translator. HIV must transcribe its single-strand RNA into double-strand DNA-a genetic blueprint-using an enzyme it injected into the host cell. Reverse transcriptase inhibitor drugs, which block this process, were among the first treatments to be developed.

Researchers like Lisa A. Mahnke, MD, PhD, are studying ways

to thwart the virus at every stage of its interaction with a cel

Freatment

Mike Royal, clinical pharmacist, trains patient Gary Ebrecht

to use an injection device for administering HIV drug therapy

The host cell builds the components of HIV, which must be cleaved apart before final assembly. Protease inhibitor drugs block the cleavage enzyme. If cleavage occurs, the parts assemble into new virions, bud out of the host cell and disperse to infect other cells.

HIV enters the host's nucleus to begin

stitching its DNA into the host's DNA

- a process called integration. The

enzyme integrase facilitates this; integrase

inhibitor drugs can thwart it. The virus can

lay dormant within the nucleus for years

before it begins using the host cell to

produce new HIV components.

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