

Cancer drugs could halt Ebola virus

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Some cancer drugs used to treat patients with leukemia may also help stop the Ebola virus and give the body time to control the infection before it turns deadly, US researchers said on Wednesday.

The much-feared [Ebola virus](#) emerged in Africa in the 1970s and can incite a hemorrhagic fever which causes a person to bleed to death in up to 90 percent of cases.

While rare, the Ebola virus is considered a potential weapon for bioterrorists because it is so highly contagious, so lethal and has no standard treatment.

But a pair of well-known drugs that have been used to treat leukemia -- known as nilotinib and imatinib -- appear to have some success in stopping the virus from replicating in human cells.

Lead researcher Mayra Garcia of the US National Institute of Allergy and Infectious Diseases and colleagues reported their finding in Wednesday's edition of the journal Science Translational Medicine.

By experimenting with human embryonic [kidney cells](#) in a lab, they found that a protein called c-Abl1 [tyrosine kinase](#) was a key regulator in whether the Ebola virus could replicate or not.

The leukemia drugs work by stopping that protein's activity. In turn, a viral protein called VP40 stopped the release of [viral particles](#) from the infected cells, a process known as filovirus budding.

"Drugs that target filovirus budding would be expected to reduce the spread of infection, giving the immune system time to control the infection," the study authors wrote.

"Our results suggest that short-term administration of nilotinib or imatinib may be useful in treating Ebola virus infections."

Imatinib, which is marketed as Gleevec and Glivec, is used to treat [chronic myelogenous leukemia](#) in humans, a disease which is caused by dysregulation of c-Abl enzyme.

Nilotinib, also known as Tasigna, has been used in chronic myelogenous leukemia patients who are resistant to imatinib.

Both "have reasonable safety profiles, although some [cardiac toxicity](#) has been reported with long-term administration in a small number of patients," the study added.

According to the UN's World Health Organization (WHO), about 1,850 cases of Ebola, with some 1,200 deaths, have occurred since 1976.

The virus has a natural reservoir in several species of African fruit bat. Gorillas and other non-human primates are also susceptible to the disease.

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