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## Potential New Drug Target to Combat Kaposi's Sarcoma

*Research from the University of Leeds has identified how the virus which causes Kaposi's Sarcoma replicates and spreads -- opening a door to a possible new treatment for the disease.*

Kaposi's Sarcoma is a cancer caused by a human herpes virus and is widespread in sub-Saharan Africa, where it is the most common cause of cancer amongst those infected with HIV.

Researchers from Leeds' Faculty of Biological Sciences found that a human protein -- known as PYM -- is hijacked by the virus to help it replicate. A virus-encoded protein, ORF57, interacts with PYM and when this interaction was blocked during molecular experiments, the virus was unable to replicate. The findings are published May 6 in the EMBO Journal.

"This is the first time that the cellular protein, PYM, has been shown to play a role in virus replication and Kaposi's Sarcoma," explains Dr Adrian Whitehouse, who led the research. "Our work is still at a very early stage, but it should in time be possible to design drugs which block the interaction between PYM and the virus protein, thereby

stopping the virus replicating and hopefully stopping the cancer from developing."

Kaposi's Sarcoma-associated herpesvirus is an opportunistic infection which is most prevalent amongst people with a weakened immune system, such as those infected with HIV. Treatment for KS does exist but currently involves chemotherapy and highly active antiretroviral therapy which is both toxic and not always effective. Moreover, such combined therapies are only available to a small percentage of those affected in sub-Saharan Africa and other parts of the developing world.

The researchers -- funded by the Wellcome Trust and BBSRC -- are now looking to obtain the structure of these two interacting proteins, as the next step towards designing an anti-viral drug to combat the disease.

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