

Potential new drug target to combat Kaposi's sarcoma

May 6 2010

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 today 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.

Provided by University of Leeds

Citation: Potential new drug target to combat Kaposi's sarcoma (2010, May 6) retrieved 24 April 2024 from <https://medicalxpress.com/news/2010-05-potential-drug-combat-kaposi-sarcoma.html>

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