



For Immediate Release: July 2008
Produced for: The James Cancer Hospital & Solove Research
Institute at Ohio State University
Contact: Marti Leitch
Media Relations Specialist
mleitch@mediasourcetv.com

MEDIASOURCE

TAMING, THEN AIMING, VIRUSES AT BRAIN TUMORS

SCIENTISTS: "ENGINEERED" VIRUSES MAY HOLD PROMISE FOR CANCER TREATMENT

(COLUMBUS, Ohio) - It may sound like the plot of a medical drama, but this approach to fighting cancer is real. Scientists say they may someday be able to battle brain cancer, while using a virus to do it. Early results from the lab are promising.

The science itself may be complex, but the idea is relatively simple; modify a common virus that will bypass healthy cells and attack tumors. In some lab tests involving animals with brain cancer it's worked*.

"Even at that late stage of their tumor burden has lead to significant enhancement and survival- and sometimes even cures of some animals," says Balveen Kaur, MD at Ohio State University's Comprehensive Cancer Center.

Doctor Kaur says there is still work to do. One problem is that the immune system of some animals attack the virus and kills it before it can kill the cancer. So she is working on ways to slow the immune system so the virus can better pass through healthy cells and collect inside cancer cells. Once it does, the virus can multiply and destroy it.

"So if one virus particle goes inside the cell, it can replicate to become about 500 to 1,000 particles and then the infected cell literally bursts," says Kaur.

It's an idea that appeals to Brad Curran, who doesn't take walks with his dog for granted. It was his dog that saved his life. After finding him unconscious the dog went for help. It turns out Brad had a brain tumor and spent weeks in the hospital undergoing surgery, chemotherapy, and even learning to walk again. So the idea of a virus that could help battle tumors like his in the future is promising.

"I'm sure the recovery would be quicker and people could return to their normal activities and life and work and continue where they were," says Curran.

Human trials may still be a ways off, but researchers say they're taking important steps towards turning that idea into reality. Scientists say they have tested the virus on healthy brain tissue in humans and it has proven to be safe. One recent study at Ohio State found that combining the virus with drugs that stop blood vessels from reaching the tumor might be one way to attack and starve cancers in the brain.**

* ***Systemic Vesicular Stomatitis Virus Selectively Destroys Multifocal Glioma and Metastatic Carcinoma in Brain***, The Journal of Neuroscience, Volume 28, Number 6, February 2008. <http://www.jneurosci.org>

*****Oncolytic HSV-1 Infection of Tumors Induces Angiogenesis and Upregulates CYR61***, Molecular Therapy, The American Society of Gene Therapy, www.moleculartherapy.org