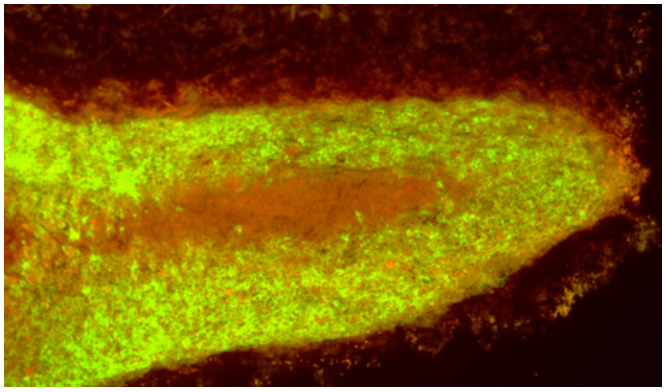
# Fast-acting virus targets melanoma in mice

17 June 2013, by Bill Hathaway



The green color shows where the vesicular stomatitis virus has infected rust-colored melanoma tumor cells after injection of the virus into the blood stream. The surrounding non-cancerous tissue is free of virus.

(Medical Xpress)—Yale researchers eradicated most melanoma tumors by exposing them to a fast-acting virus, they report in the June 15 edition of the *Journal of Virology*.

Melanoma is the deadliest type of skin cancer and can spread throughout the body and even into the brain.

"After injection into the blood stream of mice, the virus finds melanoma on its own, and is fast and aggressive with tumors," said Anthony N. van den Pol, professor of neurosurgery at Yale School of Medicine, investigator for the Yale Cancer Center and senior author of the study. "Because the virus replicates rapidly, it can kill the melanoma before the immune system responds and kills the virus."

In the process of eliminating the virus, the immune system may also begin to target and kill tumor cells , he added.

The researchers used the vesicular stomatitis virus —part of a family of viruses that include rabies and may generate flu-like symptoms in humans. The fast-acting virus ignored healthy melanocytes (the cells from which melanoma arises) but zeroed in on 19 melanoma tumors studied. In 70 percent of tumors tested, melanoma was eradicated completely, while the rest showed a more limited response to the virus.

If safety of the virus can be substantiated, the next target would be to begin trials in humans, van den Pol said.

**More information:**
jvi.asm.org/content/87/2/1019.full

Provided by Yale University