

How brain tumors invade

December 12 2011

Scientists have pinpointed a protein that allows brains tumors to invade healthy brain tissue, according to work published this week in the *Journal of Experimental Medicine*.

40% of a common but deadly type of brain tumor -- called glioblastoma multiforme (GBM) -- have mutations in a gene that encodes a protein called epidermal growth factor receptor (EGFR). These mutations result in hyper-activation of the protein.

A team led by Frank Furnari of the Ludwig Institute for Cancer Research at University of California, San Diego now finds that excessive EGFR signals ramp up expression of a protein called GBP1. Without GBP1, normally invasive GBM cells formed much less infiltrative tumors in the brains of mice.

GBP1 rendered tumors more invasive by triggering the production of MMP1, a protein that chops up the tissue around cells, allowing <u>cancer</u> <u>cells</u> to make inroads into healthy tissue. Additional work is needed to determine if therapies able to cripple GBP1 can contain GBM and impede its invasion into healthy tissue.

More information: Li, M., et al. 2011. *J. Exp. Med.* doi:10.1084/jem.20111102

Provided by Rockefeller University Press



Citation: How brain tumors invade (2011, December 12) retrieved 3 May 2024 from <u>https://medicalxpress.com/news/2011-12-brain-tumors-invade.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.