

A culprit behind brain tumor resistance to therapy

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Persistent protein expression may explain why tumors return after therapy in glioblastoma patients, according to a study published on March 5th in the *Journal of Experimental Medicine*.

Current therapy for glioblastoma, the most prevalent [malignant brain tumor](#) in adults, includes targeting a protein called VEGF, which promotes the growth of blood vessels to the tumor. Unfortunately, in most glioblastoma patients treated with anti-VEGF drugs, tumors return shortly after treatment.

Through an international collaboration, Jiri Bartek, Jeremy Rich, and colleagues now show that these recurring tumors express a perpetually activated form of the VEGF receptor. This active VEGF receptor drives growth of the tumor even when VEGF is blocked. Directly inhibiting the VEGF receptor, however, killed the tumors and extended the survival of tumor-bearing mice that were resistant to VEGF blockade.

These results suggest that blocking this active VEGF receptor may represent an alternative treatment option in glioblastoma cases where VEGF targeting has failed.

More information: Hamerlik, P., et al. 2012. J. Exp. Med. [doi:10.1084/jem.20111424](https://doi.org/10.1084/jem.20111424)

Provided by Rockefeller University

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