

Killer cocktail fights brain cancer

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The tumor (dark region, left) in this mouse brain was eradicated (arrowhead, right) with a novel drug cocktail, according to a *Journal of Experimental Medicine* study. Credit: vom Berg et al., 2013

A novel immune-boosting drug combination eradicates brain cancer in mice, according to a study in *The Journal of Experimental Medicine*.

Glioblastoma is the most aggressive form of [brain cancer](#), and current treatments only modestly prolong patient survival. Immune cells called T cells have the capacity to attack and kill [tumor cells](#), but tumors can counteract this attack by creating an environment that dampens T cell activity. T cells have ways of limiting their own activation (and thus autoimmunity), one of which is to express inhibitory cell surface proteins upon activation. In other cancer models, strategies to block these inhibitory proteins have been shown to reinvigorate T cell activation and thus promote [tumor regression](#).

Burkhard Becher and colleagues at the University of Zurich now show that a two-pronged approach is most effective against glioblastoma. They simultaneously injected mice with a T cell–boosting protein called interleukin-12 and a drug that blocks the inhibitory receptor CTLA-4. The cocktail eradicated the animals' brain tumors.

Whether these findings will pave the way for a new therapeutic approach to treat glioblastoma in humans awaits clinical trials.

More information: vom Berg, J., et al. 2013. J. Exp. Med. [DOI: 10.1084/jem.20130678](https://doi.org/10.1084/jem.20130678)

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