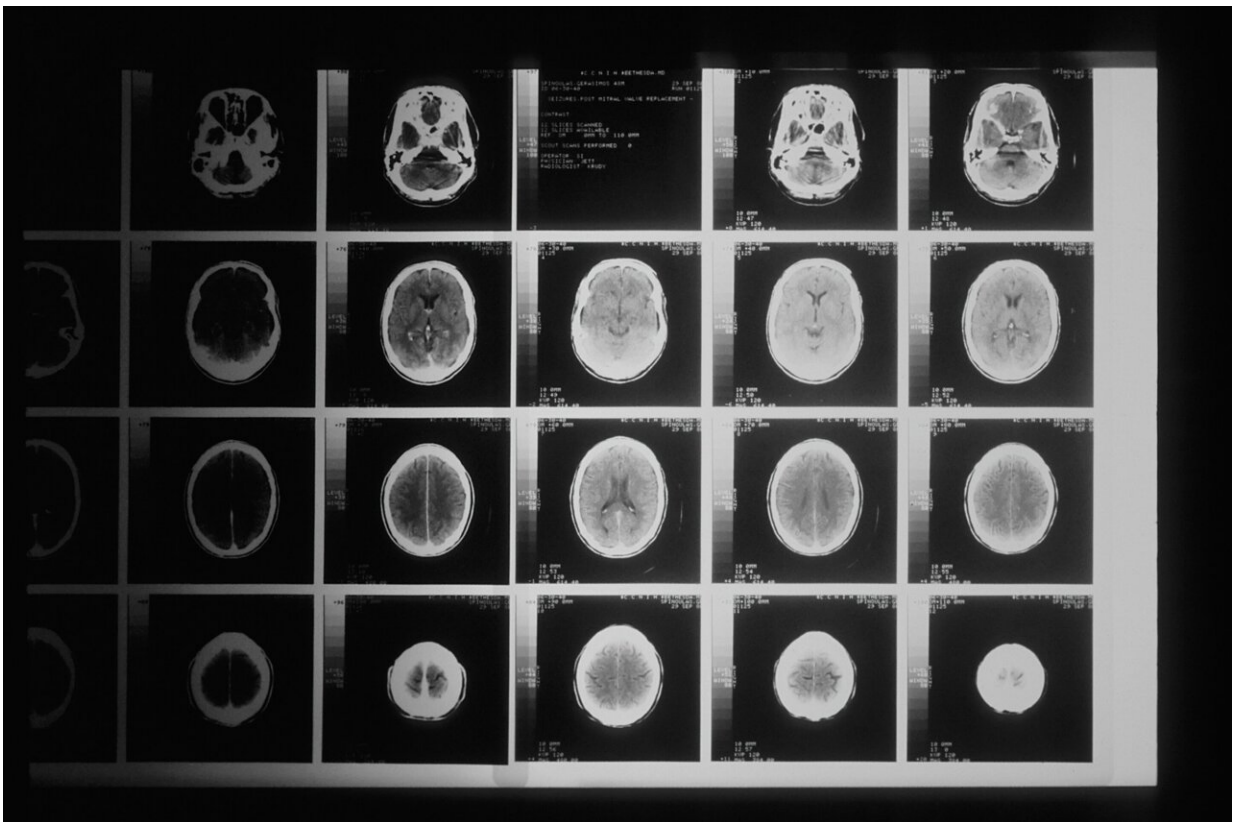


# Researchers discover a novel approach that could lead to the treatment of devastating brain tumors

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Findings from a seven-year research project suggests that there could be a new approach to treating one of the most common and devastating forms

of brain cancer in adults—Glioblastoma Multiforme (GBM).

In a peer-reviewed study published by *BMC Cancer*, scientists from the University of Surrey show that a short chain of amino acids (the HTL-001 peptide) is effective at targeting and inhibiting the function of a family of genes responsible for the growth of GBM—*Hox* genes. The study was conducted in cell and animal models.

The HTL-001 peptide used in the study has undergone safety testing and is suitable for patient trials. These trials are now being considered in GBM and other cancers.

Hardev Pandha, [project](#) lead and Professor of Medical Oncology at the University of Surrey, said:

"People who suffer from Glioblastoma Multiforme have a five percent survival rate over a five-year period—a figure that has not improved in decades. While we are still early in the process, our seven-year project offers a glimmer of hope for finding a solution to Hox gene dysregulation, which is associated with the growth of GBM and other cancers, and which has proven to be elusive as a target for so many years."

Ironically, Hox genes are responsible for the healthy growth of brain tissue but are ordinarily silenced at birth after vigorous activity in the growing embryo. However, if they are inappropriately 'switched on' again, their activity can lead to the progression of [cancer](#). Hox gene dysregulation has long been recognized in GBM.

The project was carried out in collaboration with the universities of Surrey, Leeds and Texas, and HOX Therapeutics, a University of Surrey start-up company based on the University's Surrey Research Park.

Professor Susan Short, co-author of the study from the University of Leeds, said:

"We desperately need new treatment avenues for these aggressive brain tumors. Targeting developmental genes like the HOX [genes](#) that are abnormally switched on in the [tumor cells](#) could be a novel and effective way to stop glioblastomas growing and becoming life-threatening."

James Culverwell, CEO of HOX Therapeutics, said:

"HOX Therapeutics is excited to be associated with this project and we hope that with our continuing support, this research will eventually lead to novel and effective treatments for both brain and other cancers where HOX gene over-expression is a clear therapeutic target."

**More information:** Einthavy Arunachalam et al, HOX and PBX gene dysregulation as a therapeutic target in glioblastoma multiforme, *BMC Cancer* (2022). [DOI: 10.1186/s12885-022-09466-8](https://doi.org/10.1186/s12885-022-09466-8)

Provided by University of Surrey

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