

## Agent shows ability to suppress brain metastasis and related damage

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(Medical Xpress) -- Scientists are one step closer to repairing the damage caused by brain metastasis, a major challenge in cancer treatment, according to data published in *Cancer Research*, a journal of the American Association for Cancer Research.

“We are making progress from the neck down in [cancer treatment](#), but brain metastases are increasing and are often a primary reason patients with breast cancer do not survive,” said Patricia S. Steeg, Ph.D., head of the Women’s Cancers Section at the National Cancer Institute’s Center for [Cancer Research](#).

Steeg, who is also a deputy editor of *Clinical Cancer Research*, another journal of the AACR, said very few drugs that are effective for the treatment of breast cancer break what scientists call the “blood–brain barrier” and treat disease established inside the brain.

Scientists are striving to understand the mechanisms and effects of brain cancer metastasis.

Steeg and colleagues observed the role of pigment epithelium-derived factor (PEDF) on metastatic [breast cancer](#) cell lines. PEDF is currently being studied as a therapy for macular degeneration because it has been shown to protect neurons in the retina.

Researchers found that PEDF managed to suppress the brain metastatic activity of these lines. Furthermore, it exerted a prosurvival effect on

neurons and shielded the brain from tumor-induced damage. Specifically, there was a 3.5-fold reduction in the number of dying neurons adjacent to tumors expressing PEDF.

Although further research is needed to confirm these findings and their applicability, Steeg said the findings represent a significant step forward in trying to manage this condition.

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Provided by American Association for Cancer Research

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