Study finds clue to migrating cancer cells

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Scientists have uncovered a clue to explain the invasive nature of aggressive brain tumors called gliomas.

The research by Vanderbilt-Ingram Cancer Center, published in the online edition of Oncogene, found a key receptor plays a role in the spread of the tumors.

CXCR4 is a receptor that is found in white blood cells and has been shown to play a key role in regulating the movement of cells in the immune system.

Finding something to inhibit CXCR4 could potentially lead to treatment options to prevent cancerous cells from moving to other organs, the study said.

In animal models, researchers found CXCR4 was 30 to 40 times higher n migrating tumor cells. Shutting down the CXCR4 function of the receptor weakened the cells ability to migrate, but it didn't stop it altogether -- just significantly impaired it.

"This tells us this receptor plays an important role in mediating cell invasion of gliomas," said neuorsurgical oncology director Reid Thompson.

"Now we may have a way of blocking the process that allows cancer to spread in the brain, but we will need to know more than just how to shut down these migratory cells to fight this cancer."