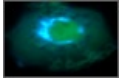


Blood plasma protein strengthens cancer-fighting cells of the immune system.

Printed from <https://www.cancerquest.org/newsroom/2011/01/blood-plasma-protein-strengthens-cancer-fighting-cells-immune-system> on 04/26/2026



Macrophages are naturally occurring cells of the immune system, but different types of macrophages have different activities in the presence of cancer cells and the results are not always so good. M1 macrophages work to fight off cancer growth by activating immune cells that target the malignant tissue. M2 macrophages work to promote tumor growth by promoting blood vessel growth (which supplies the tumor with a nutrient source). M2 cells also reduce the activity of the immune system.

A recent article published in *Cancer Cell* reveals a novel approach to converting the cancer-promoting M2 macrophages into cancer-fighting M1 macrophages. The conversion is accomplished by the naturally occurring plasma protein histidine-rich glycoprotein (HRG). The presence of this protein is associated with inhibition of tumor growth and a lower risk of metastasis (spreading of cancer to other parts of the body).

Source

<https://www.ncbi.nlm.nih.gov/pubmed/21251607>

Learn More

[Cancer Treatments](#)