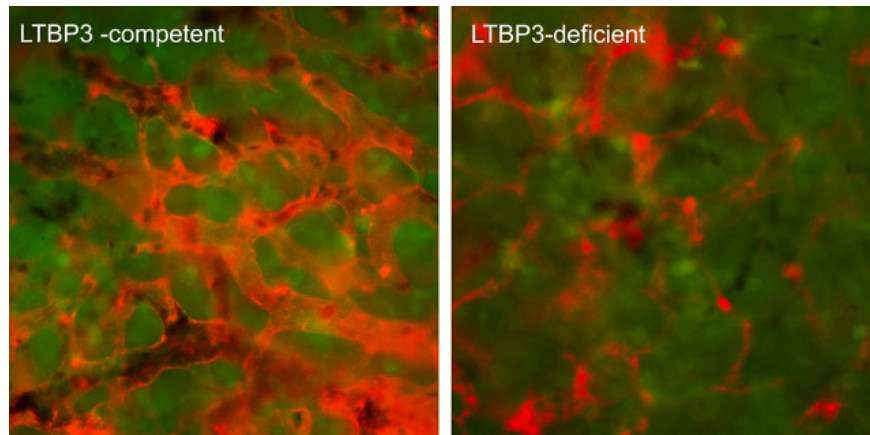


Scientists who find proteins can prevent metastatic cancer

Currently, scientists at the Scripps Research Institute have identified a protein that makes cancer metastasis possible. Reducing that level of protein may help block cancer tumors.

The cancer is like mice in a mouse-beating game, where it beats it elsewhere, which is why it's hard to beat the disease. Even if the primary tumor has been removed, the disease may have spread, appearing in other parts of the body. Currently, scientists at Scripps Research Institute have identified a protein that promotes this metastasis process and found that reducing that level of protein may help lock down cancer tumors.

TGF- β is a signaling protein, which usually controls the development of healthy cells, but cancer cells can break the rule by a mutation that allows them to spread and escape the detection of immune system. body fluids. That makes TGF- β a potential target to help fight cancer, recently scientists have created new T cells to block this protein and monitor potential cancer cells.



The problem is that TGF- β also has some positive functions in the body, so completely inhibiting these proteins is not an option. Instead, Scripps researchers have focused their efforts on finding a related protein called TGF- β Binding Protein 3 latent protein (LTBP3).

This protein is known to modulate TGF- β , so the team tested what role it could play in the metastasis of cancer.

Scientists of Scripps used chicken embryos and rodent cancer models, creating human cancerous tumor cells such as prostate cancer, head and neck carcinoma. and malignant tumors of fibroblasts (fibrosarcoma). In each trial, researchers prevented the expression and secretion of LTBP3, and found that primary tumors cannot spread.

Elena Deryugina, the first author of the study, said: *"In particular, LTBP3, seems to help tumors develop new blood vessels in a process called angiogenesis, which is very important for invasion. It is when cancer cells invade blood vessels with specific size and osmosis. "*

Results showed that LTBP3 helps tumors quickly develop new blood vessels and start metastasis at an early stage. Determining this protein gives researchers a new goal to prevent cancer from spreading very early, improving survival rates for people with certain cancer tumors. Direct blocking of LTBP3 will minimize the effect of treatment on the positive functions of TGF- β in the body.

In the future, the team will continue to study the relationship between LTBP3 and TGF- β .

The study was published in Oncogene magazine.

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