

Leukemia drug shows promise for skin, breast and other cancers

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A leukemia drug called dasatinib shows promise for treating skin, breast and several other cancers, according to researchers at Loyola University Chicago Stritch School of Medicine.

Dasatinib fights leukemia by checking the uncontrolled growth of cancer cells. But when used against other cancer cells, researchers found, the drug employs a different strategy: It causes the cells to clump together, thus preventing them from migrating. Without the ability to migrate, cancer cells cannot metastasize (spread to other parts of the body).

Mitchell Denning, PhD, and colleagues discovered the molecular mechanism behind this cell-cell adhesion. The researchers reported their findings in a study published online ahead of print in the journal *Molecular Carcinogenesis*.

Dasatinib (trade name, Sprycel) is approved for certain types of leukemia. It targets a protein called BCR-ABL that fuels the growth of cancer cells.

BCR-ABL is similar to a protein called Fyn that's found in other malignancies, including breast, brain, pancreatic, skin and head-and-neck cancers. Fyn is associated with cell-cell adhesion and cell migration.

Denning and colleagues found that applying dasatinib to cancer cells in the laboratory caused the cells to clump together, and also prevented the

cells from migrating. They found similar results with breast [cancer cells](#). While dasatinib did not eliminate Fyn, it inhibited the protein's activity.

The researchers also found that dasatinib reduced the number and size of tumors in mice that had skin cancer.

Denning noted that clinical trials are underway to test dasatinib on patients with melanoma, prostate cancer, [pancreatic cancer](#), endometrial cancer, gastrointestinal stromal cancer, ovarian cancer, multiple myeloma, Hodgkin's lymphoma and [acute lymphoblastic leukemia](#).

"We think dasatinib can be applied to many different types of cancer," Denning said.

Provided by Loyola University Health System

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