

New Chemo Cocktail Blocks Breast Cancer Like a Fence

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(PhysOrg.com) -- Think of a protective fence that blocks the neighbor's dog from charging into your backyard. The body, too, has fences -- physical and biochemical barriers that keep cells in their place.

When [breast cancer](#) spreads or metastasizes, it crashes through the body's protective fences. The disease becomes fatal when it travels outside the mammary ducts, enters the bloodstream and spreads to the bones, liver or brain. Currently, there are only drugs that try to stem the uncontrolled division of cancer cells within the ducts. Until now, no drugs specifically targeted the invasion and spread of breast cancer to the organs.

A researcher from Northwestern University Feinberg School of Medicine has found a way to strengthen the breast's "fence" to prevent cancer from metastasizing. Researcher Seth Corey, M.D., has discovered that when a drug normally used to treat leukemia is added to a commonly used breast cancer drug, the potent new chemotherapy cocktail helps prevent breast cancer cells from invading.

"This is an entirely new way of targeting a cancer cell," said Corey, the Sharon B. Murphy-Steven T. Rosen Research Professor of Cancer Biology and Chemotherapy at the Feinberg School and director of the pediatric oncology program at the Robert H. Lurie Comprehensive Cancer Program of Northwestern University.

Working in the lab with women's breast [cancer cells](#), Corey found that

when the [leukemia drug](#) dasatinib is combined with the breast cancer drug doxorubicin, the potent mix inhibits breast cancer cell invasion by half. Corey is the principal investigator of the study, which recently was reported in the [British Journal of Cancer](#).

Dasatinib targets an enzyme called the Src kinase, which is believed to play a key role in breast cancer invasion and metastases.

"Perhaps this drug could be given to prevent invasion from happening in the first place," said Corey, who also is a pediatric oncologist at Children's Memorial Hospital. "This might keep the disease in check and prevent it from progressing."

Provided by Northwestern University ([news](#) : [web](#))

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