

# Diabetic drug could help prevent the spread of cancer

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A protein activated by certain drugs already approved for treating Type II diabetes may slow or stop the spread of breast tumors.

"It's possible that these [diabetes drugs](#) could ultimately be used, alone or in combination with existing chemotherapeutic drugs, to treat some forms of breast cancer," says Chris Nicol, an assistant professor in the Department of Pathology and Molecular Medicine and Queen's University Cancer Research Institute.

As a diabetes treatment, this class of drug activates a protein that helps to maintain normal fat and [sugar metabolism](#). Recently this protein has also been found to decrease malignancy and metastatic spread of some forms of breast cancer tumors.

In earlier research, Dr. Nicol found that removing or reducing this particular protein in specific cell types such as [breast cells](#) increased the likelihood of cancer developing and the cancer was often more prone to malignancy and spreading.

This finding suggests that women who have reduced activity of this protein in their breast or associated cells and who are exposed to risk factors such as environmental or [chemical pollutants](#) or a poor (high fat) diet are more likely to develop more tumors. Furthermore, these tumors are more likely to spread throughout the body.

"We know obesity is a risk factor for many other diseases, including

diabetes and breast cancer," explains Dr. Nicol. "With the current obesity epidemic, our bodies have more circulating fats than we can normally handle, and this protein may be unable to exert its anti-cancer effects without some assistance."

Dr. Nicol has received \$438,000 from the Canadian Breast Cancer Foundation for further investigating how environmental chemicals and poor diets contribute to breast cancer risk, and determining how this protein acts to prevent breast cancer progression. He also hopes to identify whether foods containing a natural version of activators for this protein could be used as a dietary supplement for [breast cancer patients](#).

Provided by Queen's University

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