# Breast cancer: Researchers discover new path

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A team directed by Michel L. Tremblay at the Cancer Centre at McGill University has uncovered the role played by a gene associated with the propagation of breast cancer in two of five affected women.

Their study, published in the magazine *Nature Genetics*, shows that halting the activity of this gene in mice predisposed to cancer slowed the growth of — and in some cases, prevented — tumors.

"The gene we identified, PTP1b, is known for its role in diabetes and obesity," explained Dr. Michel L. Tremblay, Director of the McGill Centre for Cancer Research. "In this new study, we found that the role of PTP1b in modulating metabolism is equally crucial in the promotion of the proliferation and metastasis of cancer tumors."

An article published by the same group of researchers in Science in 1999 showed that suppressing the enzyme produced by the gene PTP1b made it possible to cure type II diabetes and obesity. A large number of pharmaceutical companies have since developed new inhibitors used in treatments for these diseases.

"Adapting these compounds is all that is needed to attack breast cancer," continued Dr. Tremblay.

"Although this study is simply a genetic and pharmacologic validation in mice, we know that 30% to 40% of all cases of breast cancer involve different levels of over-expression of PTP1b — which is a much greater proportion than is found in cases linked to hereditary baggage,"

concluded Dr. Tremblay.

On the Net: www.nature.com/ng/journal/vaop … ent/full/ng1963.html

Source: McGill University