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New link between estrogen and breast cancer

The female sex hormone estrogen turns on a gene linked to breast cancer, according to new research by Brisbane scientists.

The cancer biology team from UQ's Diamantina Institute for Cancer, Immunology and Metabolic Medicine, believe their finding will help explain the link between breast cancer and high levels of estrogen.

What we've shown is that the ability of estrogen to switch this gene on is important for the growth of breast cancer cells," Diamantina cancer biology research leader Professor Tom Gonda said.

The gene they studied, known as MYB, is found in about 70 percent of all breast cancers and is one of several dozen genes called oncogenes that promote cancer growth.

What's important in breast cancer is the ability of estrogen to turn on MYB rather than there being a mutation in the gene itself," Professor Gonda said.

He said the next step was to take the results, which come from isolated cancer cells grown in the laboratory, and test them in laboratory mice that are a better model for human patients.

We're trying to show directly that MYB can induce cancerous changes in normal breast cells.

Professor Gonda and his colleagues at UQ worked with researchers in Melbourne, Adelaide and the United States and published their findings this month in the prestigious scientific journal Proceedings of the National Academy of Sciences of the USA.

He said a drug that blocks the action of MYB might be used to treat breast cancer in the future but he warned that would take many years of hard work.

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