

# **The Role of RARRES1 in Breast Cancer**

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Cancer is one of the most complicated diseases. Since there is no treatment for most of the cancers, it has become one of the most terrifying diseases among people. Breast cancer as one of the most prevalent cancers is one of these cancers that causes most of the cancer-related death in women all around the world. Once the cancer is started from one tissue, it can be expanded to other tissues and organs of the patient. There are many factors that can cause a cancer to arise such as genes and their functions, dietary habits, environmental factors like harmful sun, and also some infections like HIV. Genes are one of the most important factors in this disease. Genes play an important role in every cell of our body and can control almost all of the mechanisms in our body. They also can transfer genetic features to next generations. However, if genes become deficient and start to function in a wrong way, they can be the reason of many disorder and diseases such as cancers. In my project, I studied one of the most important genes in our body, RARRES1, that play an important role in different mechanisms of our body. RARRES1 is also involved with activation of cellular mechanisms and features that are vital for cells. Unfortunately, malfunctioning of this gene can cause serious problems for the cell that can change the cell into a cancer cell. I tried to understand the role of RARRES1 in breast cancer. I wanted to see what can make this gene to be expressed in cell and play its distinct role. Also, I tried to understand how this gene can mediate its function in cancer cells.

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