

Vitamin D Receptor Antagonists for Treating Breast Cancer

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Technology description

Summary

Vitamin D receptor (VDR) is a nuclear receptor that is activated by calcitriol, the active form of vitamin D. It is best known for regulating dietary calcium uptake necessary for bone growth, but it also affects cell proliferation and differentiation. Therefore, it was thought that treatment with calcitriol or its derivatives could be useful to treat the uncontrolled proliferation typical of cancer cells. However, this approach has been unsuccessful to date because it leads to toxic levels of calcium in the blood. This invention relates to derivatives of calcitriol that can block cell growth without harmfully raising calcium levels. Specifically, these compounds act as antagonists of VDR blocking its ability to stimulate cell proliferation.

Application area

Potential drugs for treating breast cancer and possibly also prostate cancer, colorectal cancer, leukemia, melanoma, or glioma

Prevention of cancer in high-risk population

Research on vitamin D receptor functions and cancer

Institution

NIH - National Institutes of Health

联系我们



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