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Antiestrogenic activities of Cimicifuga racemosa extracts.

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Abstract

Despite the wide use of extracts from the rhizome of black cohosh (**Cimicifuga racemosa**) for the treatment of menopausal complaints, surprisingly little is known on their potential estrogenic properties, e.g. on **estrogen** dependent gene transcription. In addition, available informations on the effects on cell proliferation are contradictory. We therefore, tested for estrogenic and **antiestrogenic** effects of **Cimicifuga racemosa** extracts on proliferation of MCF-7 cells and on gene expression using ethanolic and iso-propanolic extracts of this medical plant. Estrogenic properties of plant extracts could neither be detected in proliferation assays, nor on gene expression using an estradiol-inducible yeast assay or the **estrogen**-inducible MVLN cells. In contrast, in all three experimental systems **Cimicifuga racemosa** antagonized estradiol induced **activities**. Estradiol induced stimulation of proliferation was inhibited by a dosage >1 microg/ml of extract concentration, gene expression was suppressed by doses of 100-1000 microg/ml of **Cimicifuga racemosa** extracts. From these results we conclude, that extracts from the rhizome of **Cimicifuga racemosa** contain compounds with **antiestrogenic** properties.

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