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Antiestrogenic activities of Cimicifuga racemosa extracts.

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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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