J Steroid Biochem Mol Biol. 2003 Jul;86(1):93-8.

DT56a (Tofupill/Femarelle) selectively stimulates creatine kinase specific activity in skeletal tissues of rats but not in the uterus.

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The novel natural product DT56a (Tofupill/Femarelle), derived from soybean, has been shown to relieve menopausal vasomotor symptoms and to increase bone mineral density with no effect on sex steroid hormone levels or endometrial thickness. In the present study, we compared the effects of DT56a and estradiol-17beta (E2) on bone and cartilage (Ep) of immature or ovariectomized female rats, by measuring the changes in the specific activity of the BB isozyme of creatine kinase (CK). Single short-term injection of high doses of DT56a induced estrogenic activity in bones and uterus similar to that of E2. When administered in multiple oral doses, DT56a stimulated skeletal tissues similarly to E2, but whereas E2 increased CK specific activity in the uterus, DT56a did not. The selective estrogen receptor modulator (SERM) raloxifene (Ral) blocked the stimulation of CK by either DT56a or by E2 in all tissues tested. Our findings suggest that DT56a acts as a selective estrogen receptor modulator stimulating skeletal tissues without affecting the uterus. The effect of DT56a on other systems, such as the vascular and the central nervous system, are currently under investigation.