

Estrogenic Activity of Yam, Pueraria, and Malt

Ji-Won Yang, Eun-Mi Choi, Sung-Ja Koo*

Department of Food & Nutrition, Kyung-hee University, Seoul Korea

Phytoestrogens are natural compounds with anticancer, proliferation, differentiation, and chemopreventive effects. In this study we compared the estrogenic activity of yam, pueraria, and malt. Two *in vitro* systems, competitive binding assay to estrogen receptor (ER) and MCF-7 cell proliferation were selected to evaluate the estrogenic effects. When assessed their estrogen receptor (ER- α and ER- β) binding capacity with the use of fluorescence-labeled compounds, the highest ER-binding resources that are examined in this study were malt and pueraria, respectively. The estrogenic activity of these was further investigated using MCF-7 cell proliferation assay. In this system, ethanol extracts of yam, pueraria, and malt were capable of mimicking natural estrogens and thereby induced cell proliferation. Among the investigated resources, yam elicited the significant cell proliferation ($p < 0.05$), whereas remaining resources were weak estrogenic activity. These data suggest a potential use for some dietary supplements, ingested by human beings, in the treatment of menopausal symptoms.

- * 담당자 : 구성자
- * Tel : 02-961-0709
- * 휴대전화 : 011-257-3068
- * Fax : 02-968-0260
- * E-mail : sjkoo@khu.ac.kr