International Journal of PharmTech Research
CODEN (USA): IJPRIF, ISSN: 0974-4304, ISSN(Online): 2455-9563
Vol.9, No.12, pp 441-447, 2016

Evaluating the activity of cowpea extract and genistein against GPx and SOD levels in a mouse model of endometriosis

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Abstract : To evaluate the effect of genistein and cowpea extract in increasing SOD (superoxide dismutase) and GPx (glutathione peroxidase) in the mouse model of endometriosis. In this study, the experimental research method was an in vivo experiment of mice (Mus musculus) with a post-test only control group design. Selection of subjects was randomly performed. Preparations of peritoneal fluid from the mouse model with endometriosis was measured with the quantitative colorimetric determination of SOD activity using the Enzychrom superoxide dismutase Assay Kit (Bioassay System), as well as the measurement of GPx using a colorimetric assay for cellular glutathione peroxidase, namely Bioxytech GPx-340 (Oxis research). SOD and GPx were analyzed with the Analysis of Variance (ANOVA). There were increased levels of GPx and SOD following treatment with genistein and cowpea extract. There was no significant difference in activity between genistein and cowpea extract in increasing SOD and GPx levels in peritoneal fluid from the mouse model of endometriosis. SOD levels following cowpea extract treatment tended to be smaller than with genistein, but it can be said that the cowpea extract has a similar ability to genistein, although slightly smaller.
Keywords: cowpea extract, genistein, glutathione peroxidase, lesions, peritoneal fluid.

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