

Poster presentation

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## Psychoimmunological effects of dioscorea in the ovariectomized rats

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### Background

Anxiety level is correlated to the interleukin-2 (IL-2) in the brain. This study was aimed at investigating the behavioral and IL-2 effects of dioscorea (will yam), a widely used Chinese medicine for postmenopausal anxiety and depression.

### Materials and methods

One month after the ovariectomy, female Wistar rats were screened in the elevated plus-maze (EPM) for measuring the anxiety level and were then administered orally by dioscorea (250, 750, and 1500 mg/kg/day). These animals were then tested again in the EPM and in the forced swim test (FST) 3 weeks later.

### Results

The anxiety behavior of rats in the EPM was increased by the ovariectomy. In addition, the IL-2 was elevated in the cortex of the rats with higher anxiety level (HA rats). The anxiety and the IL-2 level were decreased after the treatment of dioscorea in the HA rats. The despaired behavior in the FST, however, was not affected by the dioscorea treatment.

### Discussion

These results indicate that the ovariectomy-induced anxiety and the changes of neuroimmunological function in the cortex are reversed by dioscorea. Furthermore, individual differences need to be taken into account when psychoneuroimmunological issues are measured, determining anxiety levels in the EPM seems to serve as a useful approach.