Anxiolytic activity of aerial part of *Mercurialis annua* aqueous extract in using light/dark and hole board tests

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**Background:** The present study was designed to study anxiolytic property of aqueous extracts of *Mercurialis annua*; an important and commonly used for its medicinal properties belongs to Euphorbiaceae family.

**Methods:** The anxiolytic activity was evaluated with the adult mice by hole board test, and the light–dark box test, and motor coordination with the rota rod test. The efficacy of the plant extract (100–600 mg/kg) was compared with the standard anxiolytic drug diazepam (1 mg/kg).

**Results:** The extract increased the time spent in the brightly-lit chamber of the light/dark box, as well as in the number of times the animal crossed from one compartment to the other. Performance on the rota rod was unaffected. In the hole board test, the extract significantly increased head-dip counts. *Mercurialis annua*, in contrast to diazepam, had no effect on locomotion.

**Conclusions:** These results provides support for anxiolytic activity of *Mercurialis annua*, in line with its medicinal traditional use, and may also suggest a better side-effect profile of Mercurialis anua relative to diazepam.

**Keywords:** Anxiety, *Mercurialis annua* aqueous extract, Rota rod test, Hole board test, Light–dark test, Morocco

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