

9th Global Neuroscience Conference

November 21-22, 2016 Melbourne, Australia

Anxiolytic-like effects of acute treatment with *Mercurialis annua* extract in experimental mouse anxiety models

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Background: The most widely prescribed medications for anxiety disorders are the Benzodiazepines; however, they have prominent side effects. Thus, interest in alternative medicine that affects the 'mind' is growing. In Morocco folk medicine, the use of *Mercurialis annua* is commonly recommended for relief of anxiety, although no scientific information supporting this use is available and therefore we undertook the study to evaluate the anxiolytic potential the methanolic extract of *Mercurialis annua* by using a battery of appropriate rodent test models.

Methods: The purpose of this study was to characterize the putative anxiolytic-like effects of methanolic extract prepared from the aerial parts of *Mercurialis annua* using the elevated plus maze (EPM) and Open field tests (OF) in mice. The methanolic extract of *Mercurialis annua* was administered orally to Balb/c mice, at graded doses; 1H prior to behavioral assessments.

Results: In the elevated plus-maze test, methanolic extract of *Mercurialis annua* at 100 mg/kg showed an anxiolytic effect by increasing the time spent on and the number of entries into the open arms of the EPM comparable to standard anxiolytic drug, diazepam. In an open field test methanolic extract of *Mercurialis annua* (100mg/kg) increased the central area crossing, the time spent and number of rearing in the center of arena.

Conclusions: These observations suggest that *Mercurialis annua* might possess significant anxiolytic potential.

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