Evaluationof Behavioral and Biochemical Parameters of *Piper methysticum*in mice

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Introduction: *Piper methysticum* (*P. methysticum*) is a plant popularly known as Kava Kava, which is consumed in the form herbal formulations. It is mainly used for treatment of anxiety,agitation and insomnia. However, studies have demonstrated that its consumption can cause hepatotoxicity. **Objectives:**The purpose of this study was to evaluate behavioral and biochemical parameters of *P. methysticum*in order to find a dose plant with anxiolytic effect and that not causes toxicity. **Material and Methods:** Swiss mice were divided into six groups which received doses of 10, 40, 100 and 400 mg/Kg of *P.methysticum*or its vehicle (sunflower oil) by gavage during 21 days. Diazepam solution was used as positive control and administrated intraperitoneally at the animals in a dose of 3 mg/Kg. After the treatment, were performed behavioral tests (open field and plus maze test). After behavioral tests, the animals were anesthetized and their blood collected by cardiac puncture for performance biochemical tests of cholesterol, aspartate amino transferase, alanine aminotransferase and creatinine. The project executed was approved by the Ethics Committee on Animal Use this university under the number 1637290415. **Results and Discussion:** In open field test, only Diazepam group decreases locomotor parameters evaluated. However, at the Plus maze test, Diazepam group and the animals that received 40mg/Kg of *P. methysticum* increased the time spend in the open arms. We did not find any difference among the groups when the biochemical parameters were evaluated. According to results, we can observe that dose of 40 mg/Kg of *P. methysticum*has anxiolytic effect, but did not decrease locomotors parameters as Diazepam and also did not cause toxic effects. **Conclusions:** The effects observed suggest that the *P. methysticum*contain compounds with anxiolytic properties and that the doses used in this studydid not cause toxicity at the animals used.

Keywords: Kava kava, anxiolytic, toxicity.

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