Repeated treatment with *Passiflora alata* Curtis (Passifloraceae) reduces feeding behavior and does not induce anxiolytic or sedative effects in mice.

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**Introduction:** *Passiflora alata* constitutes many Brazilian phytomedicines used for sedative and anxiolytic purposes. Considering the medicinal use of *Passiflora alata* in Brazil and the scarce number of studies on repeated administration to humans or animals, this study evaluated the behavioral, physiological and biochemical effect of the repeated treatment with an aqueous spray-dried extract of *P. alata* leaves containing 2.5% (w/v) of flavonoids (PA) in mice.

**Methods:** Male CF1 mice (20-35g) (n=6-10/group) were treated (p.o.) for 14 days with PA (2.5; 25 or 250mg/kg), diazepam (2 mg/kg), saline (10 mL/kg) or did not receive any intervention (sham). The feeding behavior was evaluated one hour after the first administration (acute test) and 24 h after the last administration of the repeated treatment (15th day). The body weight gain was monitored along the days. Different groups were submitted to the following tests 24 h after the last administration (15th day): plus maze followed by the spontaneous locomotor activity test; catalepsy test followed by barbiturate sleeping time test. For biochemical measures, mice were anesthetized with thiopental (50 mg/kg i.p.), the blood was drawn from cardiac puncture and centrifuged (3500 rpm, 5 min). Serum glucose and lipids were determined using commercial kits. Also, liver, kidney, perirenal fat, epididymal and peritoneal fat were immediately excised and weighed. The results were analyzed by one-way ANOVA followed by Student-Newman-Keuls, except the sleeping time results, which were analyzed by Kruskal-Wallis test. All experimental protocols were approved by CEUA - UFRGS (Commission of Ethics in Animal Use) (n°19431).

**Results and discussion:** The repeated treatment (once a day during 14 days, by gavage) with the highest dose tested PA (250 mg/kg) did not alter the mice behavior on open field, elevated plus maze, catalepsy and barbiturate sleeping time tests, suggesting that *P. alata* does not present cumulative sedative effect. Diazepam group did not present anxiolytic or hypnotic sedative effects, suggesting development of tolerance. On the other hand, the repeated administration of PA 250 (0.840 ± 0.292) decreased mice feeding behavior when compared to, PA 25 (1.253 ± 0.417 g), PA 25 (1.307 ± 0.474 g) and SHAM (1.386 ± 0.501g) groups (p<0.05) and weight gain (g), PA 250 (3.66 ± 1.91) when compared to PA 25 (7.60 ± 3.13), PA 25 (6.57 ± 3.23), DZP (8.09 ± 2.21), SAL (7.56 ± 3.52) and SHAM (6.83 ± 1.86) groups (p<0.01). PA 25 (5.31 ± 0.26) and PA 250 (5.23 ± 0.41) also reduced mice relative liver weight (%) when compared to SAL (5.77 ± 0.17) and SHAM (5.93± 0.31) groups (p<0.05) and caused mild hepatic hydropic degeneration as well as a decrease in ALT (U/L) serum level PA 25 (30.8 ± 10.7 ) and PA 250 (30.6 ± 7.0) when compared to SAL group (71.0 ± 13.4) (p<0.05). These results point to the needs of further studies searching for toxicity as well as potential anorexigenic effect of *P. alata*.

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