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Evaluation of lectin extracted from *Canavalia brasiliensis* on the neuropsychomotor system of murine

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ABSTRACT

Introduction: Lectins are a class of proteins extracted from the seeds of *Canavalia brasiliensis* (Lectin ConBr). Its anti-neoplastic activity has been studied in experimental models. **Aim:** To evaluate the neuropsychomotor effect of Lectin ConBr in vivo in murine. **Methods:** Thirty Swiss mice were divided into three groups: GCcontrol (n = 10) administered saline solution; G1experimental (n = 10) 50mg/kg and G2experimental (n = 10) 300mg/kg of Lectin ConBr. The neuropsychomotor analysis was performed by The Open Field Test, 4 and 24 hours after treatment. The statistic was performed by Student's t-test. **Results and Discussion:** In the CG, the results obtained after 4h were: ambulation 55.4 ± 16.8 ; self-cleaning 4.8 ± 1.3 ; lifting 21.5 ± 3.41 and defecation 0.6 ± 0.5 . G1: ambulation 43.4 ± 29.11 ; self-cleaning 3.4 ± 1.6 ; lifting 8.0 ± 8.1 and defecation 0.2 ± 0.44 . G2: ambulation 63.0 ± 14.58 ; self-cleaning 1.0 ± 0.7 ; lifting 12.8 ± 3.1 and defecation 0.2 ± 0.44 . The results obtained after 24 hours were: GC: ambulation 62.2 ± 27.9 ; self-cleaning 2.6 ± 1.5 ; lifting 15.3 ± 5.8 and defecation 1.4 ± 0.5 . G1: ambulation 32.0 ± 15.7 ; self-cleaning 1.8 ± 1.7 ; lifting 6.0 ± 6.0 ; defecation 0.6 ± 0.5 . G2: ambulation 62.0 ± 30.1 ; self-cleaning 0.6 ± 0.5 ; lifting 16.8 ± 7.3 and defecation $0.4 \pm 0.5^*$. ConBr did not alter the spontaneous movement of the mice after 4 hours, however, the self-cleaning act and the total number of lifting in the treated groups decreased. After 24 hours, it was observed that self-cleaning decreased at the dose of 300mg/kg, lifting was decreased at a dose of 50mg/kg and the number of fecal cakes was decreased at all doses, suggesting anxiolytic action without motor impairment. **Conclusion:** The results indicate an anxiolytic effect of ConBr on treated animals when compared to the control group.

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