

## CROTOXIN INCREASES THE EMOTIONALITY OF RATS.

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**BACKGROUND:** Crotoxin is the most toxic and abundant component among the pharmacological active components of the *Crotalus durissus terrificus* venom. Considering that it presents a neurotoxic phospholipase A<sub>2</sub> (Ito, J. et al., *Psychopharmacol*, 101:27, 1990), the objective was to investigate crotoxin activity on rat's behavior using the open-field and holeboard tests.

**RESULTS:** Male Wistar rats weighing 180-220 g and housed under 12-hour light-dark cycle, were used. Crotoxin (100, 250 or 500 µg/kg), or saline, ip, were administered 2-hour before the assays, while diazepam (1.5 mg/kg) or vehicle were administered 30 min before them. In open-field, ambulation and rearing (frequency), and grooming and freezing (s) were measured for 3 min. In holeboard, head-dips (frequency) and time spent head-dipping (s) were recorded during 5 min. Crotoxin decreased ambulation ( $y=8.11-1.1(10^{-2})x+1.6(10^{-3})x^2$ ;  $R^2=96.04\%$ ), rearing ( $y=4.71-1.5(10^{-3})x$ ;  $R^2=75.78\%$ ), and head-dips ( $y=2.49-9.56(10^{-4})x$ ;  $R^2=88.22\%$ ), whereas, increased grooming ( $y=15.55+1.5(10^{-2})x$ ;  $R^2=62.92\%$ ) and freezing ( $y=5.2+1.4(10^{-2})x$ ;  $R^2=75.28\%$ ). Time spent head-dipping was not significantly modified. Crotoxin-induced behavioral effects were antagonized by diazepam, a classical anxiolytic compound. The statistical analysis was ANOVA for one way classification, using orthogonal polynomial ( $p<0.05$ ).

**CONCLUSION:** It was demonstrated that crotoxin increases emotionality, which is accompanied by a decreased exploratory behavior. It is suggested that these behavioral effects can be a consequence of a crotoxin-induced anxiety.

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