Neuroprotective evaluation of essential oil from *Alpinia zerumbet* inducted by electroconvulsive shock in mice

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**Introduction:** *Alpinia zerumbet* (Pers.), from zingiberaceae family, is a specie known in Brazil as colony. The study aimed to watch the central effects of essential oil of *Alpinia zerumbet* (OEAZ) inducted by electroconvulsive shock (ECS).

**Experimental part:** We used male mice of Swiss species (25-30 g), who were divided into four groups (n = 7). Each group was subjected to sub-chronic treatment (5 days) with intraperitoneal applications (ip) OEAZ at doses of 100 and 200 mg/kg and 200 mg/kg of valproate (Valp), the positive control was saline. On the last day of treatment, 30 minutes after application, the model animals were submitted to ECS. We assessed the time of seizure latency (CL) and Clone Tonic convulsion (CTC). Results were expressed as mean ± standard error of mean (SEM) and analyzed by ANOVA followed by Student Newman Keuls as post hoc test. Significant compared to control values p<0.05. The study was approved by the ethics committee of the UFC - n° 45/10.

**Results / Discussion:** The results were expressed in seconds, and the averages of the variable LC groups were as follows: control group, SALINA: 2.000 ± 0.0 s; group OEAZ 100: 2.333 ± 0.3333 s; group OEAZ200: 2.333 ± 0.2108 s; Valp: 2.000 ± 0.0 s. These results showed no statistically significant difference, since the variable of CTC obtained the following results: Saline group: 15.17 ± 0.7923 s, 100 OEAZ group: 11.67 ± 1.022 s, group OEAZ 200: 7.000 ± 0.3651 s and Valp group: 7.167 ± 0.7032 s. The analysis of this variable showed significant differences from groups and Valp OEAZ 200mg/Kg in relation to other groups.

**Conclusion:** We conclude that the group treated with OEAZ 200 showed similar protection compared to Valp positive control, showing a neuroprotective anticonvulsant activity by OEAZ.

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