

ANTICONVULSANT AND ANTI-INFLAMMATORY EFFECTS OF THE POLYSACCHARIDE RICH EXTRACT FROM GENIPA AMERICANA LEAVES

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Plant polysaccharides present some activities involving the central nervous system, such as neuroprotective, antidepressant, antioxidant and anti-inflammatory. We aim to evaluate the anticonvulsant and anti-inflammatory effects of the polysaccharide rich extract from *G. americana* leaves in mice. The leaf dry powder (5 g) was depigmented in methanol and the polysaccharide-rich extract (PRE) obtained by extraction with NaOH followed of precipitation in absolute ethanol. PRE was dissolved in 0.9% NaCl and administered (9 mg/kg) in male Swiss mice (25-35 g) by intraperitoneal (i.p.) route, 30 min before seizures induced by a single dose of pentylenetetrazole (PTZ: 70 mg/kg, i.p.), n=7/group. The synergism of PRE effect was evaluated by its association with diazepam (DZP: 0.01 mg/kg). After euthanasia, the prefrontal cortex (CPF), hippocampus (HC) and striatum (EC) were removed for the quantification of myeloperoxidase levels (MPO) by o-dianisidine method. Experimental protocol was approved by Animal Ethics Committee (UECE N° 2451142/2014). The PRE increased the seizure latency (9 mg/kg: 171,7 ± 29,62 versus saline: 62.00 ± 4,709 s) and death latency (9 mg/kg: 597.4 ± 101,5 versus saline: 150.0 ± 14.52). The association of PRE with diazepam potentiated the protective effect of DZP, increasing seizure latency (DZP: 128,3 ± 24,62 versus PRE + DZP: 222.4 ± 47.57), without altering in death latency. MPO levels was reduced in hippocampus (PRE: 34.24 ± 7.167, DZP: 42.27 ± 9.559 and DZP + PRE: 31.26 ± 5.726 versus saline + PTZ: 81.91 ± 11.70) and striatum (PRE: 17,89 ± 3,310, DZP + PRE: 18.69 ± 3.776 versus saline + PTZ: 37.27 ± 5.169). However there was no difference between groups (DZP, PRE or DZP + PRE) in each brain area. We conclude that PRE of *G. americana* leaves protects against seizures and promote anti-inflammatory effects in brain.

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Biography

Edna Maria Camelo Chaves finished her doctorate at the age of 6 at the Federal University of Ceará, in Pharmacology. She is an Adjunct Professor at the State University of Ceará, working in the Graduate Program in Physiology and Nursing. She has published more than 13 articles in renowned magazines and has served as a reviewer of scientific journals.

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