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Evaluation of ovicidal and larvicidal activities of methylene chloride-methanol extract of *Annona senegalensis* (Annonaceae) stem bark on Heligmosomoides bakeri (Nematoda, Heligmosomatidae)

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Infections of animals with gastrointestinal nematodes constitute a world wide health problem. The aim of this study was to assess the effectiveness in vitro anthelmintic of Methylene Chloride/Methanol (1:1 volume mixture) extract of Annona senegalensis (Annonaceae) the barks of the stem on Heligmosomoides bakeri eggs and larvae (for ovicidal and larvicidal activities, respectively). Annona senegalensis is included in the list of the plants that have anthelminthic activity in the traditional medicine, just as with other plants like Albizia anthelmintica (Mimosaceae), Canthium mannii (Rubiaceae), Nauclea latifolia (Rubiaceae) and Carica papaya (Caricaceae). The plant material was collected from the peripheral Savannas of Foumban, Noun Division, West Region of Cameroon. The final concentrations of plant extract tested were: 5 000, 3 750, 2 500, 1 250 and 625 µg/mL; 4% Tween 80 aqueous solution was used as negative control. Ovicidal and larvicidal activities were assessed thru egg embryonation and hatching rates and thru mortality rate of L1 and L2 larvae, respectively. The extract produced low but dependant concentration on egg embryonation and hatching rates. With the highest extract concentration (5 000 µg/mL) embryonnation and hatching rates of 20.8% and 16.1% were obtained respectively. On the contrary, a strong larvicidal activity was observed. L1 mortality rates of 100% and 96.7% were recorded respectively, in the two most concentrated extract (5 000 and 3 750 µg/mL) just after six hours of exposition. L2 larvae appeared more resistant as the two most concentrated extracts (5 000 and 3 750 µg/mL) produced larvicidal mortality rates of 96.1% and 90.0% respectively, just twenty four hours after the administration of the treatment. These results suggest that the extracts of A. Senegalensis bark stem used, possess high larvicidal properties. Further more in vivo studies to assess the effects on adult worms and toxicity on mice hosts are still needed.

Biography

Wabo Pone Josué has completed his PhD at the age of 40 years from University of Yaoundé 1, Cameroon. He is the member of staff of the Department of Animal Biology, University of Dschang, recently has been copted as an expert of International agency of atomic energy (IAEA) for a mission in Ouagadougou (Burkina Faso) on medicinal plant as anthelmintic. He has published more than 25 papers in reputed journals and has expertise many articles. I supervise 5 PhD students and more than 10 Masters Students.

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