

ANTHELMINTIC ACTIVITY OF JUICE AND INFUSION OF ARISTOLOCHIA BRACTEOLATA LAM. - AN IN VITRO STUDY

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Abstract - Worm infestation and anthelmintic resistance offer fascinating insights into global health. The juice and infusion of leaves of *Aristolochia bracteolata* Lam. (*A.bracteolata*) were screened to evaluate anthelmintic activity in adult earthworms (*Pheretima califrcant* (Kingberg)), since their anatomy and physiology are similar to those of human intestinal roundworms. The plant was collected and authenticated. The mature earthworms were divided into 20 groups, each with two earthworms. Albendazole (20mg/mL) and water were employed as positive and negative controls, respectively. By serial dilution, different concentrations of fresh leaf juice (25%, 50% and 100%) were obtained. The infusions were made at four different temperatures (4°C, 27°C, 65°C and 100°C), the earthworm's paralysis (TP) and death times (TD) were recorded. When compared, TP and TD with the juice with albendazole (TP;P=0.031, TD;P=0.012) and the infusion with albendazole (TP;P<0.001, TD;P<0.001) showed a significant difference . However, juice at 100% concentrations showed minimum TP (47.5 min) and TD (63 min) compared to albendazole (TP-68; TD-90.5 min). Dry and fresh 65 °C and 100 °C temperature infusions showed higher TP (>236 min) and TD (>275 min). However, the infusion of both dry and fresh leaves at 65 °C with a constant temperature revealed an equal TP (141.8 min). The infusion prepared at 4°C and 27°C did not result in any deaths or paralysis. The juice has lower TP and TD than the infusion. The current study revealed that *A. bracteolata* leaves exhibit anthelmintic activity. According to TP and TD, juice has more effective anthelmintic action than infusion. The management of worm infestations will be improved by insightful research on the anthelmintic activity of *A. bracteolata*. The detailed study needed prior to clinical practice.

Keywords: *A.bracteolata* 1, *Anthelmintic activity* 2, *Earthworms* 3, *Roundworm* 4