Anti-Schistosomal Activity of *Chenopodium Ambrosoides* Extracts in Adult Worms *in vivo* and *in vitro.*

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Abstract

Plants may contain ingredients that have anti-parasitic activity against parasites of medical significance. *Chenopodium ambrosoides* (Wormseed) a wide spread herb in the Family Chenopodiacea was investigated for anti-schistosomal activity using, the human trematode parasite, *Schistosoma mansoni*, as the target. The plant is well known for its vermifuge and anti-helminthetic properties. The root, stem, leaves and fruit of the plant were extracted sequentially using *n*-hexane, dichloromethane, methanol and distilled water as solvents and tested for anti-schistosomal activity. The crude extracts of leaves and fruits remarkable and significant activity that resulted in significant egg counts reduction, compared to untreated controls ($P < 0.05$). Among the plant extracts (*n* – hexane, dichloromethane, methanol and aqueous), aqueous (leaf) and methanol (fruit) extracts showed responses closest to PZQ. Aqueous (leaf) had 46% worm's reduction, methanol (fruit) had 23% worm's reduction and Praziquantel had 34% worm's reduction ($P > 0.05$). The *in vitro* results showed methanol (fruit) extract killed more adult worms of *S. mansoni* than the aqueous (leaf) extract. Methanol (fruit) extract potency depended on concentration. The higher the concentration, the faster the killing. The effect of both methanol (fruit) and aqueous (leaf) extracts on *S. mansoni* adult worms showed that methanol (fruit) extract had better potency than aqueous (leaf) extract. The killing effect of methanol (fruit) and aqueous (leaf) extracts were statistically similar to Praziquantel.

Keywords*: Chenopodium ambrosoides* (Wormseed), *In vivo* and *In vitro*

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