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Anthelmintic Activity of Aqueous Extracts of *Cassia fistula* Linn. *In-vitro* Study

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Anthelmintic resistance is a vital issue in controlling intestinal worm infestations. The traditional medical literature reveals the anthelmintic activity of *Cassia fistula* Linn. (*C. fistula*). Hence, our study aimed to determine the anthelmintic activity based on the specific plant parts of *C. fistula*. An in-vitro study was conducted in different concentrations (40, 20, and 10 mg/mL) of aqueous extract of fresh mature leaves, flowers, stem bark, stem, root bark, root, fruit pulp, and seeds of *C. fistula* on blowfly larvae (*Lucilia eximia*). Albendazole (20 mg/mL) was used as a standard. Distilled water and CMC solution were used as controls. Three larvae were placed in 33 petri dishes (33 groups), and 10 mL of each solution was introduced. The times of paralysis (Tp) and death (Td) of the larvae were noted. The Tp and Td were significantly ($p<0.05$) lower in the aqueous extract of root bark, stem bark, and fruit pulp of *C. fistula* compared with the standard. However, the minimum Tp (3.66 min) and Td (7.66 min) were observed in 40 mg/mL aqueous extract of root bark. Tp and Td lasted longer in 20 mg/mL (Tp = 101.33 min; Td = 108.66 min) and 10 mg/mL (Tp = 100.66 min; Td = 107.00 min) aqueous extracts of flowers. In conclusion, the entire plant and the plant parts have anthelmintic properties. However, root bark, fruit pulp, and stem bark showed significant anthelmintic activity compared to the standard. Insightful studies on anthelmintic activity of *C. fistula* will improve the treatment of parasitic infestation.

Keywords: *anthelmintic, Cassia fistula Linn., blowfly larvae*