

An in vitro Evaluation of the Anthelmintic Activities of the Decoction and the Hexane-Soluble Extract and Its Fractions of the Aerial Part of *Ruellia tuberosa* Linn

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Abstract : This study was conducted to evaluate the possible anthelmintic activities of the decoction and the nonpolar constituents of the aerial part of *Ruellia tuberosa* Linn. against *Eudrilus eugeniae* or African Night Crawler earthworms as test organism which are of anatomic and physiological resemblance to the intestinal roundworm parasites of human beings. The in vitro anthelmintic assay of each extract was done by determining the time of paralysis and death of the test organisms at three concentrations (3, 25, 50 mg/mL). The hexane-soluble extract (RTH) showed better results compared to the decoction (RTD) at all concentrations employed. All the fractions of RTH showed significantly higher anthelmintic activities (111.43, 48.19, and 62.3 minutes, respectively) compared to their mother extract (164.56 minutes) at 3-mg/mL concentration. Moreover, RTH5 showed a comparable activity with the positive control mebendazole at 3-mg/mL concentration. Remarkably, fraction RTH4 exhibited the best anthelmintic activity at 3-mg/mL concentration for it showed the strongest anthelmintic activity than the rest of the test solutions tested. The study demonstrated the promising anthelmintic activity of the nonpolar constituent of the ethanolic extract of *R. tuberosa* Linn.

Keywords : anthelmintic activity, *Eudrillus eugenia*, mebendazole, *Ruellia tuberosa* Linn

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