

Biological screening of Kenya medicinal plants using artemia salina (ARTEMIIDAE).

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Abstract

Medicinal plants constitute important components of flora and are widely distributed in different regions of Kenya. Based on ethnopharmacological significance, we collected several medicinal plants from South Coast, Kenya used in traditional medicine to treat malaria and evaluated for their toxicity. In the present study, brine shrimp (*Artemia salina*) test was used to screen antimalarial plants for their cytotoxicity. A total of 80 crude extracts from 30 plant species distributed among 18 plant families were evaluated for their toxicity against *Artemia salina*. Cytotoxicity results showed that 23 (57.5%) of organic and 7 (17.5%) of aqueous extracts showed significant toxicity to the brine shrimp ($LC_{50} < 100 \mu\text{g/ml}$). Organic extracts obtained from the leaves of *Momordica foetida* Schumach. (Cucurbitaceae), stem bark of *Warbugia stuhlmannii* Engl. (Canallaceae) and the root bark of *Zanthoxylum chalybeum* (Eng) Engl. (Rutaceae) exhibited potent activity with LC_{50} values of 8, 8 and 11 $\mu\text{g/ml}$ respectively. The toxicity data obtained suggest that some of these plants would not make good malaria treatments, suggesting a need for further in vivo toxicological studies. The present study could be useful in the search for new antitumor compounds from the Kenyan flora.