PHYTOCHEMICAL INVESTIGATION OF SELECTED *ALSTONIA* SPECIES FOR ANTIPLASMODIAL PRINCIPL

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ABSTRACT

Malaria is major public health problem worldwide but its effect is largely felt in Africa and other developing parts of the world. With the increasing resistance of the plasmodium falciparum parasites towards the current antimalarial drugs, treatment is compromised in the management of the disease. Various control measures like spraying of the vector zones and sleeping under treated nets cannot completely protect the host from the mosquito bites. Likewise, the current treatment involving the use of chloroquine, quinine and the combination therapy of artemisinin is weakening. Therefore, this calls for a search of alternative drugs that can be long lasting and more effective. It is worth noting that species from Alstonia have shown some pronounced antimalarial activity. Hence in this study, the leaves, stem bark and root bark of Alstonia scholaris and Alstonia boonei will be investigated for antimalarial activity with the aim of identifying various compounds that might possess better antimalarial properties from the current drugs. For this study to be achieved, the collected plant material will be dried under shade, ground into powder and the ground powder will be extracted with a solvent mixture of methanol and dichloromethane (1:1). The crude extract after concentration on a rotary evaporator will be subjected to various chromatographic techniques for isolation and purification of pure compounds. The pure compounds will be characterized using both spectroscopic/spectrometric techniques. The antimalarial activity will be assessed based on the Plasmodium falciparum growth inhibition assay.