

ABSTRACT

FORMULATION OF A HERBAL MIXTURE FROM EXTRACTS OF *ALSTONIA BOONEI* AND *ANNONA SQUAMOSA* AND ASSAY OF ITS ANTIMALARIAL EFFICACY IN ALBINO MICE.

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In the present work, a herbal formula was made from root bark extracts of *Alstonia boonei* and leaf extracts of *Annona squamosa* – two herbs commonly used by the people of South-East Nigeria in the management of among other conditions, fever associated with malaria. The antimalarial potency of the formula was investigated in albino mice infected with *Plasmodium berghei* parasites at the phases of suppression against early infection, curative effect on established malaria and repository effect on residual infections. Results showed that the formula elicited significant blood schizontocidal activity at all the phases of antimalarial studies; for instance, at the highest dose level of 800mg/kg body weight tested, the herbal formula elicited 90.54 ± 0.46% curative effect against established malaria. This was observed to be comparable to values recorded for two standard drugs chloroquine and artesunate which elicited curative effects of 91.69±0.90% and 93.83 ± 0.66% respectively. At this dose level also, the serum AST and ALT activities of the mice significantly ($P < 0.05$) reduced to 39.92 ± 3.43 i.u/L and 32.67±2.45 i.u/L respectively compared to the values of 84.17±1.47 i.u/L and 75.17±1.5 i.u/L respectively observed for the untreated animals. Total protein level increased significantly to 7.62 ± 0.87g/dL. Hb and PCV levels of the mice increased significantly to 78.33 ± 2.11g/L and 23.58 ± 0.80% respectively compared with the values of 54.83 ± 2.24g/L and 16.75 ± 0.6% respectively recorded for the infected and untreated mice. It was thus concluded that the herbal formula possesses strong antimalarial potency which could be exploited in the preparation of standard orthodox antimalarial drugs.

Key words: Herbal mixture, *Alstonia boonei, Annona squamosa,* antimalarial, Efficacy.

BIOGRAPHY

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