

NOTE**Antimalarial Activity of an Alkaloidal Drug Isolated from *Enicostema* of Ganteaceae Family**

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Enicostima commonly known as Nahi, was collected locally and extracted in petroleum ether in soxhlet apparatus. The crude product was purified using Mayr's reagent and yielded as liriodenine when tested against plasmodium showed schizonticidal activity.

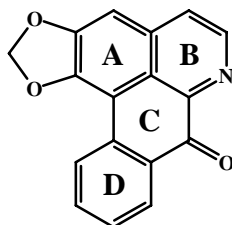
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Malaria continues to be one of the main public health problems in the world especially in African countries. It particularly affects the young adult engaged in economic development activities, pregnant womans and international illiterate group of population moving into malaria endemic areas. Inadequate health services improper use of antimalarial drugs, limited resources and operation makes it difficult in the implementation of malaria control activities.

Enicostima of ganteaceae family was collected from the forest of Harda district, India. Voucher specimen of the plant after proper identification was procured in the Herbarium record of pest control research laboratory at Vidisha (S.No. 20). The powered material of plant of about 40-60 mesh was soxheleted using *n*-hexane, benzene and chloroform, respectively for more than 48 h. Crude extract thus obtained was 25 % of the powered material, which was further purified to get an active principle, liriodenine.

Purification of alkaloids: Petroleum ether plant stuff mixture and dil. HCl stuff mixture was mixed and evaporated. The evaporated petroleum ether gung was combined with HCl and filtered and excess of 1 N HCl was added and filtered again. The extract was boiled with activated charcoal solution of alkaloids and water soluble form of the acidic solution was taken and basified.

The isolation and characterization of alkaloidal substance from crude extract of the plant was preliminary ascertained by the alkaloidal reagent using picric acid, perchloric acid, Mayr's reagent, Wagner's reagent and UV, ¹H NMR and mass spectroscopy and with the comparison of authentic marker compound¹.



Liriodenine

The present study report the chemo suppressive and prophylactic activities of the antimalarial drug isolated and characterized from indigenous plant *Enicostima* which is quite comparable to the previous finding^{2,3}.

The extracts which were tested for their Schizonticidal activity showed varying results. The parasitaemia on day 4. Even though 100 mg/kg body weight showed negligible effect in all the three groups, 300 and 500 mg/kg body weight showed a reduction of 50-70 % parasitaemia. There was not much difference between 500 and 100 mg/kg body weight, except in methanol fraction which showed better results. The methanol fraction in a dose of 1000 mg/kg body weight showed a reduction of 37.29 %.

REFERENCES

1. H.F. Wong and G.D. Brown, *Phytochemistry*, **59**, 529 (2002).
2. A.R. Bilia, *Life Sci.*, **70**, 769 (2002).
3. M.K. Ikhinmwin, O.A. Sofola and E. Elebuteo, *J. Pharmacol.*, **69**, 507 (1981).

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