

Abstract

Therapeutic Potential of Fractions of *Globimetula oreophila* (Oliv. ex Hook.f.) Leaf Extract Growing on *Azadirachta indica* against *Plasmodium berghei*-Infected Mice: An In Vivo Approach [†]

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The development of parasite resistance to first-line antimalarial medicines, especially the ACTs, has made the research and development of novel antimalarial medications vital. *Globimetula oreophila*, a plant used in traditional medicine to treat malaria, is an example of a natural product that may provide new antimalarial drugs with fewer side effects, less drug resistance, and greater efficacy than synthetic drugs. This study aims to evaluate the antiplasmodial properties of *G. oreophila*'s fractions. After collection and authentication, the leaves were air-dried and reduced in size using a pestle and mortar. The pulverized plant was macerated in 70% ethanol and fractionated with solvents in the increasing polarity of n-hexane, chloroform, ethyl acetate, and n-butanol to produce the various fractions. The antiplasmodial activity of the n-hexane, chloroform, ethyl acetate, and n-butanol fractions of *Globimetula oreophila* leaf extract was assessed using an in vivo method in *Plasmodium berghei*-infected mice. In the mice, the fractions' median fatal dose (LD₅₀) was calculated to be more than 5000 mg/kg. At doses of 125, 250, and 500 mg/kg, the fractions significantly ($p < 0.001$) reduced the parasitemia level. The fractions of *G. oreophila* showed significant in vivo antiplasmodial activity, which upholds the earlier in vivo findings for the crude extract as well as its folkloric use.

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