Antimalarial Activity of Methanolic Leaf Extract of *Piper betle* L.

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Abstract: The need for new compounds active against malaria parasites is made more urgent by the rapid spread of drug-resistance to available antimalarial drugs. The crude methanol extract of *Piper betle* leaves (50–400 mg/kg) was investigated for its antimalarial activity against Plasmodium berghei (MH15) during early and established infections. The phytochemical and antioxidant potentials of the crude extract were evaluated to elucidate the possibilities of its antimalarial effects. The safety of the extract was also investigated in ICR mice of both sexes by the acute oral toxicity limit tests. The leaf extract demonstrated significant (P < 0.05) schizontocidal activity in all three antimalarial evaluation models. Phytochemical screening showed that the leaf extract contains some vital antiplasmodial chemical constituents. The extract also exhibited a potent ability to scavenge the free radicals. The results of acute toxicity showed that the methanol extract of *Piper betle* leaves is toxicologically safe by oral administration. The results suggest that the Malaysian folklorical medicinal application of the extract of *Piper betle* leaf has a pharmacological basis.

Keywords: *Piper betle*, methanolic extract, antimalarial activity

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