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Antiplasmodial effects of *Brucea javanica* (L.) Merr. *longifolia* Jack extracts and their combination with quinine on *Plasmodium falciparum* in culture

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Abstract: Fruits of *Brucea javanica* (L.) Merr. ("Ratchadad" in T *Eurycoma longifolia* Jack ("Plalaipeag" in Thai) are used as traditi treatment of malarial fever. Ethanol, methanol, ethyl acetate, ethyl a extracts were tested against the multidrug-resistant *Plasmodium fa*

Ethanol and methanol-ethanol extracts, together with methanol resid
javanica (L.) Merr. showed the highest antiplasmodial activities wi
0.3, 0.3 ± 0.1 and 0.3 ± 0.05 Mg⁄mL, respectively, comparable to
chloroquine (0.17 ± 0.02 Mg⁄mL) and quinine (0.3 ± 0.1 Mg⁄mL).
methanol-ethanol extracts of roots of *E. longifolia* Jack showed hig
of the other solvent extracts, but their activities were about 10-fold
extracts from *B. javanica* (L.) Merr. fruit. In drug combination test
Merr. and *E. longifolia* Jack extracts did not appear to antagonize
of chloroquine and quinine. Not only well-known quassinoid glycos
and flavonoids identified by thin-layer chromatography in ethanol an
extracts and in methanol residue of *B. javanica* (L.) Merr fruit and
be responsible for the antimalarial activity. Taken together, our extra
provided extracts containing novel active compounds that did not an
effects of the two widely used antimalarials. This finding could lend
discovery of active antimalaria compounds of *Brucea javanica* (L.)
longifolia Jack as drugs for the treatment of malaria that could be e
combinations in order to delay the onset of parasite drug resistance.

Key words: *Plasmodium falciparum*, *Brucea javanica* (L.) Me
longifolia Jack, traditional medicine, antimalarial activity, drug com

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