Thesis	A Study on the Chemistry and the in-vitro Antimalarial Activity of Eurycoma longifolia Jack and Other Thai Medicinal Plants
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ABSTRACT

A preliminary screening for antimalarial activity was carried out on a number of Thai medicinal plants selected for their folkloric reputation as antimalarial agents. The screening method employed was a modification of the microtitration technique introduced by Iber. The 50 % ethanolic extracts and water extracts of Eurycome longifolia Jack (Simaroubaceae) root, Oroxylum indicum Vent. (Bignoniaceae) bark, Tinospora crispa Miers ex Hook. f. & Thomas. (Menispermaceae) vine and Morinda coreia Ham. (Rubiaceae) root, were tested for their in-vitro activity against the erythrocytic phase of Plasmodium falciparum from selected donors. The tests were performed with Cinchona succirubra Par.

as standard antimalarial plant together with chloroquine and quinine as standard antimalarial drugs. Thus it was found that the ethanolic (50 %) extracts of all plants tested showed varying inhibitory effect upon P. falciparum while only the water extracts of E. longifolia, M. coreia and C. succirubra were active under the test condition.

Of the four plants investigated, E. longifolia showed the highest parasiticidal activity comparable to that of C. succirubra. It was, therefore, chosen for further study. Separation of the chloroform extract by means of column chromatography afforded six different fractions, one of which showed strong schizonticidal effect(1.5653 µg/ml blood suspension).

Further fractionation of this major fraction yielded four different compounds. When tested for their in-vitro antimalarial activity only compound "a" exhibited schizonticidal activity(0.3945 µg/ml blood suspension). It was identified as "eurycomalactone", a bitter principle previously isolated from the same plant. The second component (c), was identified as "scopoletin" with no activity. Work is in progress on the identification of the other compounds.