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Isolation and structural elucidation of aporphine alkaloid from the bark of *Actinodaphnemacrophylla* and its activity against *Plasmodium falciparum*

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A study of alkaloidal content and its activity against *Plasmodium falciparum* has been conducted on bark of *Actinodaphnemacrophylla* (Lauraceae). The bark was obtained from Bogor Botanical Garden, West Java, Indonesia. Crude alkaloidal extract was prepared by maceration in dichloromethane after moistened with NH₄OH 25%. A major alkaloid was isolated by column chromatography using silica gel and a mixture of CH₂Cl₂ and methanol as gradient solvent system. Fine white needle crystals were obtained from the isolation process and its molecular structure was determined by analysis of spectra of NMR, IR, MS and compared by references. In vitro bioactivity test of the compound was performed against *P. falciparum*. The results showed that the bark of *A. macrophylla* contained an aporphine alkaloid, actinodaphnine that had activity against *P. falciparum* with IC₅₀ value of 0.095 µg/mL.

Biography

Tiah Rachmatiah has bachelor degree from University of Indonesia, Jakarta, Indonesia and Ph. D from University of Indonesia, Depok, Indonesia. Her area of research is phytochemistry and bioactive compounds from natural products. Currently, she is serving as Lecturer at Pharmacy Department, Faculty of Science and Mathematics, National Institute of Science and Technology (ISTN), Jakarta, Indonesia.

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