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The antiplasmodial activity of spermine alkaloids isolated from Albizia gummifera.

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Abstract

From the stem bark of *Ekebergia capensis*, 10 new triterpenoid compounds, ekeberins A (1), B (2), C₁ (3), C₂ (4), C₃ (5), D₁ (6), D₂ (7), D₃ (8), D₄ (9), and D₅ (10), were isolated together with 17 known compounds. The structures of these new compounds were elucidated on the basis of the results of spectroscopic analysis, and the absolute configuration of compounds 6–10 were
determined by partial synthesis from known compounds and using the Mosher ester method. Several of these compounds were screened in vitro against both chloroquine (CQ)-sensitive and -resistant Plasmodium falciparum isolates and were found to exhibit moderate antiplasmodial activity, with compounds 20 (7-deacetoxy-7-oxogedunin) and 27 (2-hydroxymethyl-2,3,22,23-tetrahydroxy-2,6,10,15,19,23-hexamethyl-6,10,14,18-tetracosatetraene) showing IC$_{50}$ values of 6 and 7 µM, respectively. Compound 27 at a dose of 500 mg/kg showed moderate parasitemia suppression of 52.9% against P. berghei NK 65 in a mouse model.