



4'-Prenyloxyderrone from the stem bark of *Millettia oblata* ssp. *teitensis* and the antiplasmodial activities of isoflavones from some *Millettia* species



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ABSTRACT

The CH₂Cl₂/MeOH (1:1) extract of the stem bark of *Millettia oblata* ssp. *teitensis* showed antiplasmodial activity (IC₅₀ = 10–12 µg/mL) against the chloroquine-sensitive (D6) and chloroquine-resistant (W2) strains of *Plasmodium falciparum*. Chromatographic separation of the extract led to the isolation of a new isoflavone, 4'-prenyloxyderrone (**1**), together with known isoflavones (8-O-methylretusin, durmillone, maximaisoflavone B, maximaisoflavone H and maximaisoflavone J), a rotenoid (tephrosin) and a triterpene (lupeol). Similar investigation of *Millettia leucantha* resulted in the identification of the isoflavones afrormosin and wistin, and the flavone chrysin. The identification of these compounds was based on their spectroscopic data. Five of the isoflavones isolated from these plants as well as 11 previously reported compounds from *Millettia dura* were tested and showed good to moderate antiplasmodial activities (IC₅₀ = 13–53 µM), with the new compound, 4'-prenyloxyderrone, being the most active (IC₅₀ = 13–15 µM).

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