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In vitro antiplasmodial activity of 18 plants used in Congo Brazzaville traditional medicine

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Abstract

Sixty-six extracts of 18 plants commonly used by traditional healers in Congo Brazzaville for the treatment of malaria have been investigated for in vitro antiplasmodial activity. Ethanolic and dichloromethane extracts of 7 among the 18 studied plants were moderately active ($10 \mu\text{g/ml} < \text{IC}_{50} < 50 \mu\text{g/ml}$). These extracts concerned *Cassia siamea* (bark), *Cogniauxia podolaena* (root), *Landolphia lanceolata* (root and leaves), *Millettia versicolor* (leaves), *Pseudospondias microcarpa* (leaves), *Uapaca paludosa* (leaves) and *Vernonia brazzavillensis* (leaves). These results support their traditional use as antimalarial plants. The bark extract of *Uapaca paludosa* showed a good activity ($<10 \mu\text{g/ml}$) and the extracts from *Quassia africana* (root and leaves) even exhibited IC_{50} values less than $1 \mu\text{g/ml}$. Except for *Quassia africana*, for which the three solvents (water, ethanol and dichloromethane) present an effective extraction, no aqueous extract was highly active. The cytotoxicity of aqueous, DCM and ethanol extracts of *Quassia africana* was tested on KB cell lines.

Keywords:

Malaria; Medicinal plants; Pharmacological screening; *Plasmodium falciparum*; Traditional medicine