

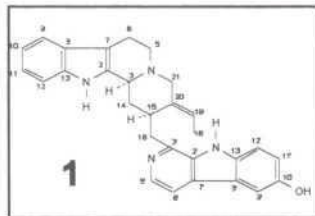
10'-HYDROXYUSAMBARENSINE, A NEW ANTIMALARIAL BISINDOLE ALKALOID FROM THE ROOTS OF *STRYCHNOS USAMBARENSIS*.

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Strychnos usambarensis Gilg (Loganiaceae) is a tree used traditionally by people of the Banyambo tribe who live on the border between Rwanda and Tanzania as the main ingredient of a curarizing arrow poison¹. A number of tertiary alkaloids found in the root bark showed antiplasmodial, anti-giardial, anti-amoebic and anti-mitotic activities^{2,3}. In a continuation of our search for potential antiplasmodial compounds from the roots of *Strychnos usambarensis* and other *Strychnos* species², we have isolated a new antimalarial usambarensine (2) derivative, named 10'-hydroxyusambarensine (1). 10'-Hydroxyusambarensine has been extracted by EtOAc in a Soxhlet apparatus and purified by liquid column chromatography with CHCl₂ / MeOH and by preparative TLC. The structure and stereochemistry of the substance were determined by detailed spectroscopic methods (UV, CD, IR, ESI and HRFAB MS, ¹H and ¹³C 1D and 2D NMR). 1 and 2 were tested *in vitro* on two strains of *P. falciparum*. 1 was slightly more active than 2 against the two strains (IC₅₀ < 0.5 µg/mL). The two compounds were more active against the

resistant clone than the susceptible one and the activity of 1 against the resistant clone was comparable to these of quinine and chloroquine.



(1) L. Angenot, *Ann. Pharm. Franç.* **1971**, *29*, 353.

(2) C.W. Wright et al., *Phytother. Res.* **1994**, *8*, 149-152.

(3) K. Bonjean et al., *Anticancer Res.* **1996**, *16*, 1129-1138.

IC ₅₀	chloroquine sensitive strain (FCA 20)	chloroquine resistant strain (W2)
1	0.480 ± 0.014 µg/mL	0.160 ± 0.016 µg/mL
2	0.655 ± 0.013 µg/mL	0.265 ± 0.023 µg/mL

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