GLUCOINDOLE ALKALOIDS FROM STEM BARK OF *STRYCHNOS MELLODORA*

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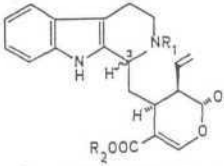
Strychnos mellodora S. Moore is an African species growing in montane rain forests (800-1200 m) of East Africa (Tanzania, Zimbabwe, Moçambique) [1].
Stem bark has been screened for alkaloids. A previous screening showed the presence of a main alkaloid : dolichantoside (1) [2]. Two other alkaloids having similar UV spectra to that of dolichantoside were separated by MPLC and monitored by TLC. One of these compounds was identified as strictosidine (2) by comparison (UV, MS, IR, CD, diode-array HPLC, co-TLC) with an authentic sample and literature data [4,6]. The other compound was identified as palicoside (3) by means of UV, CD, IR, mass, ^{13}C- and ^{1}H- NMR spectra [5]. On the other hand, the presence of isodolichantoside has not been confirmed [2].
As the absolute configuration of dolichantoside 3-α *(S)* established in our laboratory by C. Coune *et al.* [3] has been criticized by Arbain [7], we confirmed the 3-α *(S)* configuration of these three glucoalkaloids by comparison of their CD spectra with that of strictosidine obtained by stereospecific condensation of tryptamine and secologanin, catalysed by strictosidine synthase [6]. Their CD curves clearly show similarities between 200 and 300 nm. Moreover, isodolichantoside (H 3-β *(R)*) recently isolated by Achenbach *et al.* [8] displayed un inverse CD curve.
This is the first time that these three glucoalkaloids have been found together in the same plant. It is well known that strictosidine is involved in the biogenesis of many indole alkaloids [6,9]. On the other hand dolichantoside is possibly implicated in the biogenesis of akagerine derivatives [9]. Biotechnological experiments can be now carried out to confirm this hypothesis and to evaluate the potential biosynthetic pathway from palicoside.



	R_1	R_2	H-3
DOLICHANTOSIDE(1)	CH_3	CH_3	α
STRICTOSIDINE(2)	H	CH_3	α
PALICOSIDE(3)	CH_3	H	α
ISODOLICHANTOSIDE	CH_3	CH_3	β

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