

β -CARBOLINE GLUCOALKALOIDS FROM *STRYCHNOS MELLODORA*

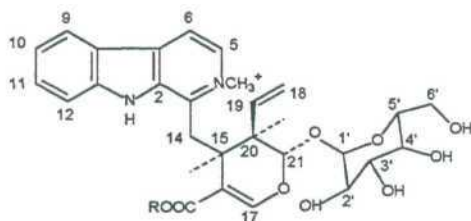
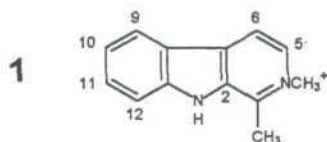
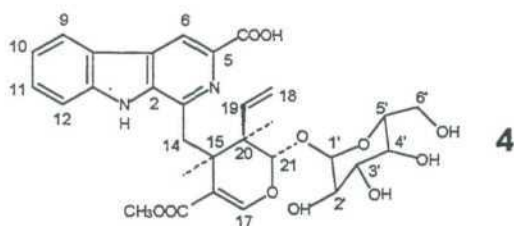
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Strychnos meliodora S. Moore is an East-African endemic species distributed in the mountain rainforests of Tanzania, Zimbabwe and Mozambique [1]. A first investigation on this plant in our laboratory has led to the isolation and identification of three indolic glucoalkaloids: dolichantoside, palicoside and strictosidine [2].

In continuation of our studies on the alkaloidal composition of *Strychnos meliodora* stem bark, we isolated by means of MPLC, HSCCC and preparative-TLC three N_b -methylated β -carbolinium compounds, melinonine F (1), isolated from *Strychnos usambarensis* roots [3] and the new 3,4,5,6-tetrahydropalicoside (2) and -dolichantoside (3), together with desoxycordifoline (4), a β -carboline glucoalkaloid previously found in two *Adina* species (Rubiaceae) [4,5]. They all characterized by a blue fluorescence under UV light. The structures of the compounds were elucidated on the basis of spectroscopic studies (UV, IR, MS, NMR), chemical reactions and enzymatic glucose hydrolysis.

This is believed to be the first report on the isolation of N_b -methylated β -carbolinium glucoalkaloids (2,3) from nature. Moreover, this is the first time that desoxycordifoline (4), a tryptophan-derived glucoalkaloid has been found in a member of the family of Loganiaceae.



2 : R = H

3 : R = CH₃

We have isolated six glucoalkaloids from *Strychnos meliodora*, including strictosidine, the recognized exclusive precursor of all monoterpene indole and quinoline alkaloids [6,7]. This species, with significant amounts of those alkaloids, is a very primitive one from a phylogenetical point of view. It is a potential source of glucoalkaloids useful for biotechnological experiments and studies concerning the biosynthesis pathway of those alkaloids. Dolichantoside and palicoside are currently subject of investigations in this field.

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