A New Bioactive Norquinone-Methide Triterpene from *Maytenus scutioides*

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**Abstract:** By antimicrobial and cytotoxic-guided fractionation, a bioactive norquinone-methide triterpene, 15α-hydroxypristimerin, was isolated from a South American medicinal plant, *Maytenus scutioides*. Its structure was determined on the basis of spectroscopic evidence. Successful chemical transformation of pristimerin to netzahualcoyene indicates that the 15-hydroxy compounds seems to be a possible precursor of 14(15)-ene-quinone-methide-triterpenoids in the biogenetic pathway.

As part of an intensive study of the bioactive compounds from South American medicinal plants (1, 2), we studied the active principles of genus *Maytenus* (Celastraceae), which have been widely used in folk medicine (3, 4). *M. scutioides* Loureig and O'Donnell (5) is a subtropical shrub distributed in the Central region of South America. The aerial part and the roots of this plant are used as cardiotonic and abortifacient, respectively, by the inhabitants of these regions (6). By antimicrobial and cytotoxic-guided fractionation, an n-hexane-Et2O (1:1) extract of the root bark of *M. scutioides* gave celastrol, pristimerin, tingenone, netzahualcoyene (7), scutione (2) and the new norquinone-methide triterpene 15α-hydroxy-pristimerin (1), as its active principles.

The n-hexane-Et2O (1:1) extract of the bark root of *M. scutioides* was repeatedly chromatographed on Sephadex LH-20 and silica gel. From the active fractions compound 1 was isolated as a red lacquer and had a molecular formula of C30H40O5 by HREIMS and 13C-NMR data. Its IR spectrum revealed the presence of hydroxy groups (3600 and 3300 cm−1), carboxyl group (1720 cm−1), and conjugated carbonyl group (1590 cm−1). Its 1H-NMR spectrum showed signals characteristic of a triterpenic quinoid system at δ 6.51 (d), 3 6.52 (s) and δ 6.98 (d), corresponding to the three vinyl protons, H-7, H-1, and H-6, respectively: five angular methyl groups, and a methyl group on an aromatic ring at δ 2.21. Also the 1H-NMR spectrum showed signals for a carboxymethyl group at δ 3.57 and a doublet at δ 4.30 (J = 4.2 Hz) attributable...