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## ISOLATION OF PRISTIMERIN FROM *PACHYSTIMA CANBYI*

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**Key Word Index**—*Pachystima canbyi*; Celastraceae; triterpene quinone methide; pristimerin.

*Plant.* *Pachystima canbyi* A. Grey. *Uses.* Ornamental. *Previous work.* None. *Part examined.* Root-bark. The air-dried root-bark was extracted with EtOAc, which was evaporated to an orange residue. TLC of the solid ( $C_6H_6$ -EtOAc, 4:1; silica) showed the presence of two orange compounds of  $R_f$  0.53 and 0.20. The mixture was dissolved in  $C_6H_6$  and chromatographed over silica. The less polar compound crystallized from hexane, m.p. 217–219°. Light absorption at 420 nm ( $\log \epsilon$ , 4), NMR  $\delta$  6.45, 5.78, AB quartet ( $J$  6 Hz) (2H), 6.0s (1H), 3.0s (3H), and MS,  $m/e$  464.2938, indicated that the compound was pristimerin (I)<sup>1,2</sup> ( $C_{30}H_{40}O_4$  requires: 464.2926). The IR and chromatographic behaviour were identical to those of an authentic sample.<sup>3</sup> Pristimerin, and the corresponding acid celastrol, occur in a number of genera of the closely related families Celastraceae (*Celastrus*, *Tripterygium*, *Denhamia*, *Maytenus*) and Hippocrataceae (*Pristimeria*),<sup>1,2</sup> and have antibiotic<sup>2</sup> and tumor-static<sup>4</sup> properties.

Although visible spectra indicate that the second, more polar, compound seen in the initial TLC analysis, contains the same chromophore as (I), its identity has not been established. Preliminary chromatographic evidence however indicates that it is not celastrol. The only other known triterpene of this type is tingenone, found in extracts of *Euonymus tingenens*.<sup>5,6</sup>

<sup>1</sup> NAKANISHI, K., KAKISAWA, H. and HIRATA, Y. (1956) *Bull. Chem. Soc. Japan* **29**, 7.

<sup>2</sup> HARADA, R., KAKISAWA, H., KOBAYASHI, S., MUSYA, M., NAKANISHI, K. and TAKAHASHI, Y. (1962) *Tetrahedron Letters* 603; and references cited therein.

<sup>3</sup> We are very grateful to Professor K. NAKANISHI of Columbia University for providing a sample of authentic pristimerin.

<sup>4</sup> SCHWENK, E. (1962) *Arzneimittelforschung* **12**, 1143.

<sup>5</sup> KRISHNAMOORTHY, V., RAMANATHAN, J. D. and SESHADRI, T. R. (1962) *Tetrahedron Letters* 1047.

<sup>6</sup> KRISHNAMOORTHY, V., SESHADRI, T. R., THOMSON, R. H. and MOIR, M. (1972) 8th Intern. Symp. Chem. Natural Products, New Delhi, Abstr. No. C-18.