

une trainée du premier. Une deuxième injection suivie d'un arrêt de quelques minutes du débit avant la sortie du premier pic conduit à l'obtention d'un chromatogramme différent: agrandissement très net du premier pic par rapport à son importance lors de l'injection précédente. L'analyse qualitative de ce premier pic montre qu'il s'agit de la polyprénylquinone correspondant à l'hydroquinone injectée. Il y a donc formation de ce produit par oxydation sur la silice lors de l'élution. Une phase stationnaire moins active comme la diol ne donne pas ce phénomène et est donc préférable pour la purification de tels composés.

PARTIE EXPERIMENTALE

MATIÈRE PREMIÈRE.—*H. communis* a été récoltée dans la baie de Monastir, Tunisie. Un exemplaire est conservé au service de Pharmacognosie de la Faculté de Monastir.

EXTRACTION ET ISOLEMENT DES HYDROQUINONES.—Un extrait EtOH d'*H. communis* a été partagé entre CH₂Cl₂ et H₂O. La fraction organosoluble a été chromatographiée sur gel de silice à l'aide de mélanges de polarités croissantes de *n*-hexane/EtOAc et CH₂Cl₂/MeOH, et sur Sephadex LH-20 par des mélanges de CHCl₃/MeOH. Les structures des composés obtenus ont été déterminées par les techniques habituelles: ir, eism, ¹H rmn, et ¹³C rmn. Nous précisons dans le tableau 1 le spectre ¹³C rmn de l'octaprenylhydroquinone (non publié à ce jour). Le spectre de l'heptaprenylhydroquinone lui est superposable (enlever une unité prenyl centrale).

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CONSTITUENTS OF ARAUJIA SERICIFERA

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Araujia sericifera Brot. (Asclepiadaceae) is a climbing plant native to South America and naturalized in southern Africa (1). It has been reported to have emetic activity toward livestock (2); seeds are reported as responsible for external swellings, weakening of the central nervous system, and stimulation of the gut. The latex is used in local application against warts. This vine is considered a weed in citrus groves (3) and, for its exotic shape, it is common in gardens where plantlets are obtainable from stem-node explants. It may be affected by a mosaic virus transmitted by aphids (4). A recent study on its propagation in vitro as a latex plant has been published (5), but no phytochemical data have been reported except for a negative Dragendorff's test (6).

The present paper reports the isolation of serotonin (0.10%) and 7-O-β-D-glucoluteolin (0.13%) from the leaves and stems of plant material collected in Rome. Serotonin is present also in the fruits but absent in the seeds. The purification of the two substances was made by counter-current distribution and the identification by ¹H- and ¹³C-nmr spectroscopy of the corresponding acetyl derivatives.

Serotonin is widespread in the plant kingdom (7,8); it was detected by a spectrofluorimetric method (9) in many fruits (10). Recently the occurrence of serotonin has been reported from other vegetal sources, such as *Sedum morganianum* (11), *Carthamus tinctorius* (12), cotton dust (13), and in cultures of *Pegamum harmala* (14).

With acetylcholine and histamine, serotonin is a biogenetic amine detected in the glandular hairs of irritant plants (15) such as *Urtica dioica* and *Laportea moroides* (Urticaceae) and in *Hippophaë rhamnoides* (Elaeagnaceae) (up to 0.3%) (16). However, leaves and stems of *A. sericifera* are devoid of irritant action, and therefore serotonin, which occurs in comparatively high amounts, may be a mere end product of NH₃ detoxification as recently demonstrated for the seeds of *Juglans regia* (17).

EXPERIMENTAL

PLANT MATERIAL.—Fresh aerial parts of *A. sericifera* (1.3 kg) were collected in the garden of the Istituto Superiore di Sanità, Rome, by Mr. A. Mariotti, and a voucher specimen is deposited at the Herbarium of Dipartimento Biologica Vegetale, University of Rome.

EXTRACTION AND ISOLATION.—The material was extracted at once with MeOH; most of the chlorophylls separated as insolubles from the solution during the subsequent evaporation under vacuum, and they were discarded. The residue (15 g after drying) was partitioned by counter-current distribution in a Craig Post apparatus (biphasic system: H₂O-*n*-BuOH-EtOAc, 10:8:2) and a spot (Kr=0.4, where Kr is the partition coefficient between the upper and lower phases) positive to Ehrlich and Folin-Ciocalteus reagents but negative to Dragendorff's reagent was detected.

The corresponding compound (1.26 g) was identified as serotonin by chromatographic comparison and confirmed by the ¹H- and ¹³C-nmr data of the corresponding diacetyl derivative. From a more mobile fraction (Kr>3) of the previous partition, a compound was subsequently purified by another biphasic system (H₂O-EtOAc-EtOH-cyclohexane, 10:11:4:3, Kr=0.4, 0.13%), and it was identified as 7-*O*-β-D-glucoluteolin through the nmr data of the corresponding heptaacetyl derivative (18, 19).

Details of the isolation procedure and the spectral data are available upon request to the senior author.

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