

THE STRUCTURE OF ALKALOID Y FROM *SCHEFFEROMITRA SUBAEQUALIS**

STANLEY F. DYKE† and EMERY GELLERT‡

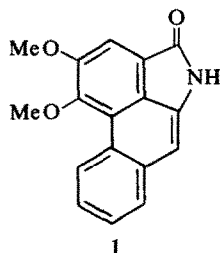
†School of Chemistry, University of Bath, Bath BA2 7AY, Avon, England; ‡Department of Chemistry, University of Wollongong, Wollongong 2500, New South Wales, Australia

(Received 13 June 1977)

Key Word Index—*Schefferomitra subaequalis*; Anonaceae; alkaloid Y structure; phenanthrene derivative.

Abstract—Alkaloid Y has been shown by direct comparison of samples to be identical with Aristolactam BII, the lactam of 10-amino-3,4-dimethoxyphenanthrene-1-carboxylic acid.

In Part 1* of this series the isolation of alkaloid Y from the bark of *Schefferomitra subaequalis* (Scheff.) Diels was reported, and some spectral data were described, but neither the amount of material nor the spectral data available allowed us to propose even a tentative structure for it. It was apparent, however, that with a molecular formula $C_{17}H_{13}NO_3$ it is highly unsaturated, and the strong band at 1720 cm^{-1} in the IR spectrum had to be considered in conjunction with the bands at 3170 and 3450 cm^{-1} . The presence of signals in the proton NMR spectrum corresponding to six aromatic



protons, two methoxyl groups and one NH or OH group accounted for all the hydrogen atoms present.

Investigation of the high resolution mass spectrum of alkaloid Y, now available to us reveals a parent ion at 279.09009 ($CH_{17}H_{13}NO_3$ requ. 279.08954) and regular losses of Me, CO and HCN fragments only; peaks at m/e 82.5 and 96.5 are considered to be due to doubly charged ions of mass 165 and 193 respectively. Such fragmentation patterns point to an ionizable lactam moiety within an aromatic structure. The spectral properties of alkaloid Y are very similar to those reported [1] for Aristolactam BII (1), isolated from the roots of *Aristolochia argentina* (Aristolochiaceae). Direct comparison of samples confirmed their identity.

Acknowledgements—We thank Dr. H. A. Priestap for a sample of aristolactam BII.

* Part 2 in the series 'Alkaloids of *Schefferomitra subaequalis*'; for part 1 see Gellert, E. and Rudzats, R. (1972) *Australian J. Chem.* **25**, 2477.

REFERENCES

1. Crohare, R., Priestap, H. A., Farina, M., Cedola, M. and Ruveda, E. A. (1974) *Phytochemistry* **13**, 1957.

ZWEI NEUE ACYLPYRROLE AUS *KLEINIA KLEINIOIDES*

FERDINAND BOHLMANN und KARL-HEINZ KNOLL

Institut für Organische Chemie der Technischen Universität Berlin, D-1000 Berlin 12, Strasse des 17. Juni 135, Germany

(Eingegangen am 23 Juli 1977)

Key Word Index—*Kleinia kleinoides*; Senecioneae; Compositae; new acylpyrrole derivatives; senecio alkaloids.

Die oberirdischen Teile von *Kleinia kleinoides* (Sch. Bip.) M.R.F. Taylor, die früher zur Sektion *Kleinia* der Gattung *Senecio* gerechnet wurde, enthalten Ger-

macren D (1), Caryophyllenoxid (2), das Hydroxygermacren 3, Lupeol (4), das Isomere 5 sowie zwei Acylpyrrole, die sich von Senecioalkaloiden ableiten.