

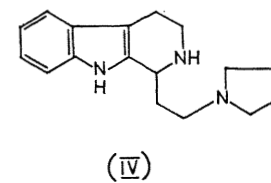
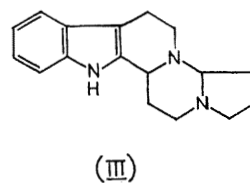
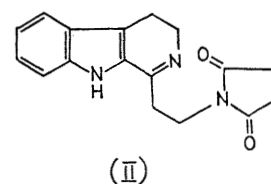
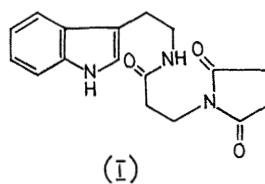
Synthesis of the Indole Alkaloid Elaeocarpidine

By JOHN HARLEY-MASON* and C. G. TAYLOR

(University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EN)

Summary A simple synthesis of the unusual pentacyclic indole alkaloid elaeocarpidine in three stages from tryptamine is reported.

THE isolation and structure determination of elaeocarpidine (III) has recently been reported.¹ We have synthesised the alkaloid and its dihydro-derivative as follows. Reaction of tryptamine with 3,*N*-succinimidopropionic acid² with ethyl chloroformate gave the amide (I) which with phosphorus oxychloride gave the dihydrocarboline (II). This with lithium aluminium hydride in tetrahydrofuran gave directly a mixture of elaeocarpidine (III) and dihydro-elaeocarpidine (IV) readily separated on an alumina column. The synthetic materials were identical in all respects with specimens kindly supplied by Dr. J. A. Lambertson.



(Received, February 13th, 1969; Com. 200.)

¹ S. R. Johns, J. A. Lambertson, and A. A. Sioumis, *Chem. Comm.*, 1968, 410.

² T. L. Gresham, F. W. Shaver, M. R. Frederick, F. T. Fiedovek, A. A. Bankert, J. T. Gregory, and W. L. Beevers, *J. Amer. Chem. Soc.*, 1952, **74**, 1323.