A NORDITERPENE LACTONE FROM PODOCARPUS HALLII

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The isolation of totarol, 16-hydroxytotarol, 16-oxototarol, sugiol, podocarpic acid and two unidentified compounds from a methanolic extract of the heartwood of *Podocarpus hallu* has been reported previously ¹ One of the unidentified compounds (compound C) which crystallized from an ether extract of the methanolic residue has now been identified as the known norditerpene lactone, sellowin- A^2 (I)

Compound-C was chromatographed on alumina with EtOAc to give material, mp. 298–299° (lit.² for sellowin-A, 298°) The IR (KBr) and UV (MeOH) spectra showed bands for an α,β -unsaturated δ -lactone and a γ -lactone while the NMR spectrum in pyridine- d^5 could be compared with that reported for sellowin-A in DMSO- d^6 (1 16, d, 7, Me 16, 1·36, s, Me 18, 1·43, s, Me 19, 3·23, d, 4, H1, 3·33, m, H2, 2·22, dd, 2·16, H3, 1·65, dd, 2·16, H3; 1·78, d, 4, H5, 5·12, dd, 1·5, 4, H6, 4·30, d, 1·5, H7, 6·12, s, H11, 4·77, d, 5, H14, 2·2, m, H15) The high resolution MS gave a molecular ion at m/e 362 (C₁₉H₂₂O₇), base peak at m/e 305, and other fragments consistent with those reported for sellowin-A Formation of a monoacetate, mp 245–247° (lit 2 246–247)° confirmed the identity of compound C

Sellowin-A strongly inhibited growth of a pea stem hook segments giving a typical podolactone type response ³

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¹ CAMBIE, R. C., SIMPSON, W. R. J. and COLEBROOK, L. D. (1963) Tetrahedron 19, 209

² SANCHEZ, W. E., BROWN, K. S., NISHIDA, T., DURHAM, L. J. and DUFFIELD, A. M. (1970) An Acad Brasil Cienc. 42, 77

³ Galbraith, M N, Horn, D H S, Sasse, J M and Adamson, D (1970) Chem Commun 170