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Four new butanolide derivatives from the genus *Hortonia*

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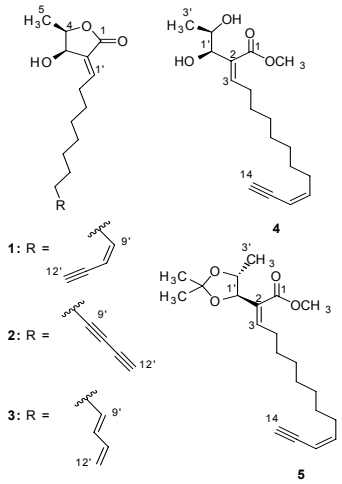
Hortonia is a genus endemic to Sri Lanka, considered to have originated in Gondwanaland about 100-120 million years ago. The latest revision of the family Monimiaceae by Dassanayake lists only three distinct species (*H. floribunda* Wight ex Arn., *H. angustifolia* (Thw.) Trimen, and *H. ovalifolia* Wight) in Sri Lanka. Having observed identity in the TLC profile of the CH_2Cl_2 extracts of the leaves of all three species, a phytochemical study was undertaken to resolve the speciation of *Hortonia*. Previously, we have reported the isolation of two new butenolides from the leaves of all three species (*H. angustifolia, H. floribunda* and *H. ovalifolia*). In the course of our further investigation of the leaves of these three plants, we have isolated three new butanolides, 1-3, and a new ring-opened butanolide, 4, whose structures were determined as (2*E*,3*R*,4*R*,9'*Z*)-2-(dodec-9'-en-11'-ynylidene)-3-hydroxy-4-methylbutanolide (1), (2*E*,3*R*,4*R*)-2-(dodeca-9',11'-diynylidene)-3-hydroxy-4-methylbutanolide (2), (2*E*,3*R*,4*R*,9'*E*)-2-(dodeca-9',11'-dienylidene)-3-hydroxy-4-methylbutanolide (3) and one new ring-opened butanolide, methyl (2*Z*,11*Z*,1'*R*,2'*R*)-2-(1',2'-dihydroxypropyl)tetradeca-2,11-dien-13-ynoate (4) by ^{1}H NMR, ^{13}C NMR, HOMOCODY, HMBC, HMQC, DEPT and HRESIMS analysis. The strerochemistry of the two OH groups at 1' and 2' carbons in 4 were determined by its conversion to the corresponding acetonide 5 followed by ^{1}H NMR analysis.



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