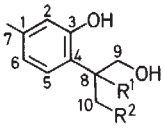
A Further Guaianolide from *Kaunia arbuscularis*

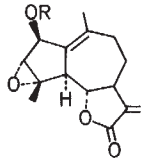
F. Bohlmann[1,3], C. Trinks[1], J. Jakupovic[1], R. M. King[2] and H. Robinson[1]

From the aerial parts of *Kaunia arbuscularis* (B. L. Robins.) K. et R. (Compositae, tribe Eupatorieae), in addition to compounds reported previously (1), we now have isolated novanin (2), the thymol derivatives **1** (3) and **2** as well as the epoxide **3**.

The structure of **2** could be easily deduced from the ^{1}H-NMR spectrum (s. Experimental) which, of course, was close to that of **1**. The structure of **3** also clearly followed from the spectral data, especially as the corresponding acetate **4** was isolated previously from a *Grosvenoria* species (4). As expected, the ^{1}H-NMR signals (s. Experimental) of 2-H and 3-H are shifted. Spin decoupling allowed the assignment of all signals. The biological tests of **3** and investigations of species related to this group are in progress.



	1	2
R^1	OH	OH
R^2	OiBu	OAc



3 R = H

4 R = Ac

Plant material was collected in January 1983 in Peru. The air dried aerial parts (270 g) (voucher RMK 9160, deposited in the US National Herbarium, Washington) were extracted with ether/methanol, 1 : 1, and the resulting extract was separated first by column chromatography (CC, SiO_2) and further by repeated TLC (SiO_2, PF 254). The polar CC fractions (ether/methanol, 10 : 1) gave, in addition to the compounds isolated previously (1), 20 mg novanin, 12 mg **1**, 12 mg **2**, 24 mg **3** (TLC: $Et_2O/C_6H_6/CH_2Cl_2$, 1 : 2 : 2) and 59 mg **4** (same solvent mixture). The ^{1}H-NMR spectra of **1** and of novanin were identical with those of authentic material.

10-Acetoxy-8,9-dihydroxythymol (**2**)

Colourless oil; IR $\nu_{max}^{CHCl_3}$, cm^{-1}: 3410 (OH), 1620 (aromat.); MS: 240.099 (6) (M^+) (calc. for $C_{12}H_{16}O_5$: 240.099), 167 (91) (M - CH_2O-Ac), 149 (100) (167 - H_2O); ^{1}H-NMR ($CDCl_3$, δ ppm): 6.72 (1H, br, s, 2-H), 6.90 (1H, d, J = 8, 5-H)), 6.67 (1H, br, d, J = 8, 6-H), 2.28 (3H, s, 7-H), 3.89 and 3.81 (each 1H, d, J = 12, 9-H), 4.53 and 4.46 (1H each, J = 12, 10-H), 2.09 (3H, s, OAc).

2β-Hydroxy-3α,4α-epoxy-3,4-dihydrokauniolide (**3**)

Colourless oil; IR $\nu_{max}^{CHCl_3}$, cm^{-1}: 3580 (OH), 1770 (γ-lactone); MS: 262.121 (M^+) (12) (calc. for $C_{15}H_{18}O_4$: 262.121), 247 (12) (M - CH_3), 244 (9) (M - H_2O), 151 (82), 135 (82), 91 (90), 53 (100); ^{1}H-NMR ($CDCl_3$, δ ppm): 4.66 (1H, br, s, 2-H), 3.53 (1H, d, J = 1.5, 3-H), 3.25 (1H, br, d, J = 10, 5-H), 3.59 (1H, dd, J = 10 and 10, 6-H), 2.77 (1H, ddddd, J = 11, 10, 3, 3, 3, 7-H), 6.14 (1H, d, J = 3), 5.41 (1H, d, J = 3), 1.97 (3H, br, s, 14-H), 1.66 (3H, s, 15-H); $[\alpha]_D$ = +85 ($CHCl_3$, c = 0.5).

References

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[1] Institute for Organic Chemistry, Technical University of Berlin, Straße des 17. Juni 135, D-1000 Berlin 12
[2] Smithsonian Institution, Washington, U.S.A.
[3] Address for correspondence

Erratum

In Heft 2, S. 168 der Planta medica wurde durch ein Versehen der Name des dritten Autors, Dr. P. Junior, nicht angegeben.
Die Arbeit muß folgendermaßen richtig zitiert werden:

Krüger, D., Wichtl, M., Junior, P., Neue Cardenolidglykoside aus Digitalis lanata, Planta Med. *50*, 168 (1984)