different R_f values of compounds (I) and juniferinin, by a depression of the melting point of a mixture of juniferidin with juniferinin (Δ mp 60°C), and by their different specific rotations.

On the basis of the facts given above, for juniferidin we propose the structure of 2-acetoxy-5-p-benzoyljuniferol. The study of the stereochemistry of juniferinin and juniferidin is continuing.

LITERATURE CITED

1. G. V. Sagitdinova, A. I. Saidkhodzhaev, and G. K. Nikonov, Khim. Prirodn. Soedin., 547 (1976).
2. N. P. Damodaran and S. Dev, Tetrahedron, 24, 4133 (1968).
3. L. A. Golovina, A. I. Saidkhodzhaev, Khim. Prirodn. Soedin., 796 (1977).
4. G. V. Sagitdinova and A. I. Saidkhodzhaev, Khim. Prirodn. Soedin., 790 (1977).

A SESQUITERPENE LACTONE FROM THE SEEDS OF *Ferula malacophylla*

V. Yu. Bagirov, V. I. Sheichenko, R. Yu. Gasanova, and M. G. Pimenov

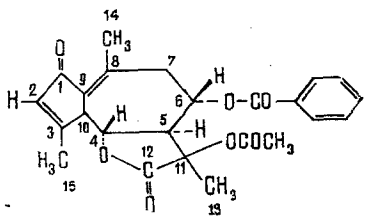
UDC 547.615.256.54.011.5

From the combined extractive substances of the seeds of *Ferula malacophylla* [1] by adsorption chromatography on neutral alumina (activity grade IV) we have isolated a previously undescribed sesquiterpene compound with the composition $C_{24}H_{24}O_7$ (I), M^+ with m/e 424, mp 208-209°C (ethanol), R_f 0.17, which we have called malaphyllinin. The IR spectrum of (I) has adsorption bands at (cm^{-1}): 1790 (CO of a γ-lactone), 1740 (CO of an acetyl group), 1702 (CO of an ester group), 1690 (CO of an α,β-unsaturated cyclopentanone), and 1640, 1620, 1600, 1590, and 1515 (double bonds in conjugation). It follows from the NMR spectrum of malaphyllinin that it has the same carbon skeleton and the same arrangement of the lactone ring and the substituents as malaphyllin [1] (s — singlet; d — doublet; q — quartet; m — multiplet; sx — sextet):

Proton	ppm, J, Hz, multiplicity
H-2	6,21; m, 1/2 W=4,0
H-1	4,72; q, $J_{4,5}$=10,0; $J_{4,10}$=11,0
H-5	3,67; q, $J_{5,6}$=10,3; $J_{4,5}$=10,0
H-6	5,73; sx, $J_{6,7e}$=3,9; $J_{6,7a}$=10,3
H-7a	2,58; q, $J_{7a,7e}$=18,1; $J_{7a,6}$=10,3
H-7e	3,04; q, $J_{7e,7a}$=18,1; $J_{7e,6}$=3,9
H-10	3,63; d, $J_{10,4}$=11,0
CH_3-13	1,61; s
CH_3-14	2,26; s
CH_3-15	2,26; s

The NMR spectrum of malaphyllinin also has the signals of the protons of an acetyl group (2.12 ppm, 3 H) and of a benzoic acid residue (7.30-8.10 ppm, 5 H). These compounds differ only by the fact that in malaphyllinin there is a benzoic acid residue in the C_6 position, while in malaphyllin there is a veratric acid residue. In the products of the saponification of malaphyllinin acetic and benzoic acids were detected by gas chromatography with markers.

On the basis of the facts given above, for malaphyllinin we suggest the structure of 11-acetoxy-6-benzoyloxy-1-oxoguaia-2,8-dien-4,5-olide:



V. L. Komarov Institute of Botany, Academy of Sciences of the Azerbaidzhan SSR, Baku. All-Union Scientific-Research Institute of Medicinal Plants, Moscow.

Translated from Khimiya Prirodnykh Soedinenii, No. 6, pp. 810-811, November-December, 1978. Original article submitted August 1, 1978.

0009-3130/78/1406-0694$07.50

LITERATURE CITED

1. V. Yu. Bagirov, V. I. Sheichenko, R. Yu. Gasanova, and M. G. Pimenov, Khim. Prirodn. Soedin., 811 (1978) [in this issue].
2. V. S. Kabanov and V. V. Vandyshev, Khim. Prirodn. Soedin., 711 (1974).

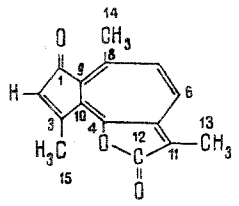
A SESQUITERPENE LACTONE FROM *Ferula malacophylla*

V. Yu. Bagirov, V. I. Sheichenko,
R. Yu. Gasanova, and M. G. Pimenov

UDC 547.615.256.54.011.5

From the combined extractive substances of the fruits of *Ferula macrophylla* [1] by adsorption chromatography on neutral alumina (activity grade IV) we have isolated a previously unreported sesquiterpene compound with the composition $C_{15}H_{12}O_3$ (I), M^+ with m/e 240, mp 256°C (decomp.), R_f 0.61, which we have called malaphyllidin. In the IR spectrum of (I) there are adsorption bands at (cm^{-1}) 1745 (CO of a γ-lactone), 1680 (CO of an α,β-unsaturated pentanone), and 1630, 1585, and 1545 (double bonds in conjugation).

The NMR spectrum of malaphyllidin has signals of protons at 2.12, 2.64, and 2.70 ppm (3 =C—CH_3, 3 H each), and 6.88 and 7.18 ppm (=C_6—H and =C_7—H, doublets, 1 H each, $J_{6,7}$ = 12 Hz). According to its elementary composition and spectral characteristics, malaphyllidin has the structure of 1-oxoguaia-2,4,5,6,8-pentaen-4,5-olide;



LITERATURE CITED

1. V. Yu. Bagirov, V. I. Sheichenko, R. Yu. Gasanova, and M. G. Pimenov, Khim. Prirodn. Soedin., 810 (1978) [preceding paper in this issue].

V. L. Komarov Institute of Botany, Academy of Sciences of the Azerbaidzhan SSR, Baku. All-Union Scientific-Research Institute of Medicinal Plants, Moscow. Translated from Khimiya Prirodnykh Soedinenii, No. 6, p. 811, November-December, 1978. Original article submitted August 1, 1978.

0009-3130/78/1406-0695$07.50