

other studies. The data obtained with compounds IV, V, VI and VIII are shown in Table III. These results indicate that only the $5\alpha, 6\alpha$ -isomer VI manifested significant antiandrogenic effects.

The introduction of unsaturation at position 1 (compound IX, Figure 2) resulted in a reduction of antiandrogenic activity of about 50%. Although 17,17-

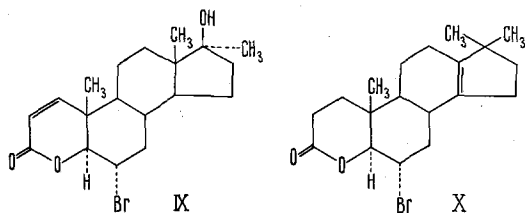


Fig. 2.

dimethyl- Δ^{13} -steroids have been reported to have significant antiandrogenic activity², the 17,17-dimethyl- Δ^{13} -analogue (compound X) was completely devoid of the ability to antagonize testosterone.

Zusammenfassung. Es wird gezeigt, dass 6α -Brom-17 β -hydroxy-17 α -methyl-4-oxa-5 α -androstan-3-one beträchtliche antiandrogene Wirkung besitzt. Isomere dieser Verbindung mit verschiedener Konfiguration an C-5 und C-6 wurden als inaktiv befunden.

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Chemical Investigation of *Jasminum auriculatum* (VAHL) Leaves. VII. Structure of Jasminol – a New Triterpene

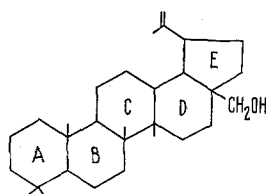
An unidentified triterpene, isolated from the leaves of *J. auriculatum* (Vahl) together with lupeol¹, appears to be new and has been provisionally named Jasminol. Jasminol, mp 208–210° (analyzed for $C_{30}H_{50}O$: C, 84.50; H, 11.74%; found: C, 84.43; H, 11.50%), $[\alpha]_D^{25} = +41.50^\circ$ (chloroform), $M^+ 426$ (mass spectrum), responded to all the tests for triterpenes, depressed the melting point of lupeol and formed an acetate (mono), mp 170°. Its UV-spectrum, λ_{max}^{EtOH} 203 (log ϵ) 3.422, indicates the presence of a substituted double bond; the IR-spectrum shows a band at 3330 cm^{-1} (OH) with a supporting peak at 1050 cm^{-1} , indicating the presence of a primary hydroxyl group (CH_2OH). The peaks at 1390 cm^{-1} and 1370 cm^{-1} are due to gem-dimethyl function, this becomes more evident from the analysis of the NMR-spectrum of the substance. The signals at 9.15, 9.18, 9.05, 8.96, 8.98 τ account for angular methyls², at 8.33 and at 5.40 τ (doublet, $J = 7.0$ cps) are assigned to a vinylic methyl and to a vinylidene group (IR 1655 cm^{-1} and 885 cm^{-1}) respectively. Jasminol appears, therefore, to possess the Lup-20-ene type skeleton³. However, the presence of only 5 angular methyl protons and the presence of primary hydroxyl protons, 6.85 τ (2H), led us to assume that C-17 might have a primary hydroxyl function instead of the angular methyl. This idea was further supported by the fragmentation pattern of Jasminol in the mass spectrum. Lupeol and moretenol, in their mass spectrum, give a peak at m/e 139, indicating the presence of OH group in ring A³. As this peak is absent in Jasminol, no hydroxyl function is

attached to ring A. The signals observed at 8.96 τ and at 9.05, 8.98 τ (C-8, C-10, C-14, Me), rule out its attachment to rings B or C. Hence the CH_2OH group is thought to be present either on ring D or E. But the splitting of ring C with rings D and E intact, would give rise to peaks at m/e 220 and m/e 249, when CH_2OH group is attached on C-17. Since these peaks are present in this compound's spectrum, and further the peak at m/e 395 formed due to elimination of water is being observed, it is inferred that the possible site of attachment of the CH_2OH group is at C-17, as in betulin⁴. Therefore it is proposed that Jasminol is Lup-20-ene-28 β -Ol.

Zusammenfassung. Ein neues Triterpen, Jasminol, wurde aus Blättern von *Jasminum auriculatum* (Vahl) isoliert und als Struktur diejenige des Lup-20-ene-28 β -ols wahrscheinlich gemacht.

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