ALKALOIDS OF *Veratrum lobelianum* GROWING IN GEORGIA

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Studies of the accumulation dynamics of alkaloids in the epigeal part of *Veratrum lobelianum* Bernch. during the start of growth showed that the qualitative and quantitative compositions vary substantially as a function of plant height.

Herein we present results from an investigation of alkaloids of the epigeal part of *V. lobelianum* (2.5 kg, 20-25 cm height) collected in Kazbegi district. Alkaloids were extracted by ethanol. The extracts were dried and treated with acetic acid (10%, pH 3.5-4.0). The acid-soluble bases were extracted by $CHCl_3$ and basicified with ammonia. The solvent was removed. The solid (4.45 g) was chromatographed over a silica-gel column (375 g) with elution by $CHCl_3$:CH_3OH (97:3). Alkaloid fractions (1.52 g) isolated from the first eluates were separated preparatively on silica-gel plates using $CHCl_3$:CH_3OH (6:1). The solution of total bases was placed at the plate origin as narrow bands so that each 0.15 mL of solution of concentration 15 mg/1.5 mL was 1.5 cm long. After development, the band above R_f 0.39 was removed from the plate and eluted by $CHCl_3$:C_6H_6:CH_3OH (4.5:4.5:1).

We obtained an amorphous base (0.067 g, mp 235-240 °C), the IR spectrum of which (KBr pellets) exhibited absorption bands at 3400 (NH), 1740, 1250 ($OCOCH_3$), 1715 (CO), and 1635 (C=C) cm^{-1}. PMR ($CDCl_3$): 0.95 (3H, d, CH_3-27), 0.98 (3H, d, CH_3-21), 1.05 (3H, s, CH_3-19), 2.10 (3H, d, CH_3-18), 2.29 (1H, m, H-20), 2.81 (1H, m, H-22), 3.40 (1H, m, H-23), 4.50 (1H, m, H-3), 5.38 (1H, m, H-6). ^{13}C NMR ($CDCl_3$, 75 MHz): 73.75 (C-3, d), 21.60 ($COCH_3$, q), 170.50 ($COCH_3$, s).

The base was subjected to alkaline hydrolysis. The hydrolysate was diluted with water and extracted by $CHCl_3$. The $CHCl_3$ was removed to afford an amorphous base, the IR spectrum of which exhibited absorption bands at 3300, 3200 (–OH, =NH), 1715 (=CO), and 1635 cm^{-1} (conjugated double bond). These correspond to absorption bands in the IR spectrum of jervine [1]. A mixed sample of the obtained alkaloid and jervine on paper chromatography (PC) and TLC in various solvent systems appeared as one inseparable spot [1, 2]. Acetic acid was identified by PC in the alkaline solution after removal of jervine [4].

A comparison of the results and the literature data [3] leads to the conclusion that the base isolated by us is O-acetyljervine.

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