

AUREOTHIN FROM *Actinomyces netropsis* STRAIN 2129

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We have continued a study of the antibiotics of *Actinomyces netropsis* strain 2129 isolated from the sierozems [gray desert soils] of the Samarkand oblast [1, 2].

The mycelium of the actinomycete grown on a peptone-maize medium in fermenters was extracted with 80% isopropanol. The alcoholic extract was concentrated under vacuum at 50-60°C, and the precipitate that deposited was treated with petroleum ether and then with acetone. The acetone extract was evaporated and the residue was recrystallized from methanol. The isolation of the antibiotic was monitored bioautographically, using as the test organism a culture of the yeast *Candida albicans*. This yielded 1.5 g of a nonpolyene antifungal antibiotic (I).

The antibiotic was obtained as crystals in the form of light yellow prisms with mp 152-153°C (methanol); composition $C_{22}H_{23}NO_6$, $[\alpha]_D^{20} + 44.5^\circ$ (c 0.02; methanol), mol. wt. 397 (mass spectrometrically). The substance is neutral; it dissolves readily in chloroform and dimethylformamide, and less readily in acetone and ethanol, and is insoluble in water.

UV spectrum of (I): $\lambda_{\text{max}}^{\text{CH}_3\text{OH}}$ 256, 343 nm (log ϵ 4.47; 4.27). The IR spectrum of (I) shows absorption bands at 1665 cm^{-1} (C=O) and 1541 and 1335 cm^{-1} ($-\text{NO}_2$).

In the NMR spectrum of (I) (CDCl_3 , δ scale), there are signals at (ppm) 3.88 (3 H, singlet, methoxy group), 1.73 and 1.97 (3 H and 6 H, respectively, methyl groups), 7.45 and 8.08 (2 H each, doublets, $J = 9$ Hz, protons of a p-substituted benzene ring), 6.19 and 6.39 (1 H each, broadened signals), 2.97 (2 H, doublet, $J = 7$ Hz), 5.07 (1 H, triplet, $J = 7$ Hz), and 4.73 (2 H, broadened singlet).

These results agree with those for the known antibiotic aureothin [3-5]; this is the first time this antibiotic has been isolated from microorganisms of the soil of the USSR.

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