1670 (CONH), 1740 (CO—OC_2H_5), 3270 cm^{-1} (NH). Found, %: C 45.79; H 4.40; Cl 12.28; N 9.66; S 10.91. Calculated for $C_{11}H_{13}ClN_2O_3$, %: C 45.75; H 4.50; Cl 12.30; N 9.70; S 11.09.

5-Acetylamino-2-amino-6-ethoxycarbonylmethylthio-4-methylpyrimidine (IIc). Colorless crystals, mp 190°–191° C (from ethanol). IR spectrum: 1670 (CO—NH), 1720 (CO—OC_2H_5), 3210, 3290, 3420 cm^{-1} (NH_2, NH). Found, %: C 46.46; H 5.65; N 20.12; S 11.36. Calculated for $C_{11}H_{16}N_4O_3S$, %: C 46.46; H 5.67; N 19.71; S 11.28.

5-Acetylamino-6-ethoxycarbonylmethylthio-4-methoxypyrimidine (IId). Colorless crystals, mp 157°–158° C (from ethanol). IR spectrum: 1670 (CO—NH), 1740 (CO—OC_2H_5), 3200, 3240 cm^{-1} (NH). Found, %: C 46.48; H 5.30; N 14.98; S 11.77. Calculated for $C_{11}H_{15}N_3O_3S$, %: C 46.30; H 5.30; N 14.73; S 11.24.

5-Acetylamino-4-chloro-6-ethoxycarbonylmethylthiopyrimidine (IIe). Colorless crystals, mp 127°–128° C (from water), yield 78%. IR spectrum: 1680 (CO—NH), 1740 (CO—OC_2H_5); 3260 cm^{-1} (NH). Found, %: C 41.70; H 4.39; Cl 12.11; N 14.49; S 11.51. Calculated for $C_{10}H_{12}ClN_3O_2S$, %: C 41.45; H 4.37; Cl 12.24; N 14.50; S 11.07.

3-Acetylamino-2-ethoxycarbonylmethylthio-5, 6-dimethylpyrazine (IIf). Colorless crystals, mp 142°–143° C (from a mixture of cyclohexane and benzene, 8 : 1), yield 61%. IR spectrum: 1670–1680 (CO—NH), 1738 (CO—OC_2H_5), 3235 cm^{-1} (NH). Found, %: C 51.18; H 6.04; N 14.32. Calculated for $C_{12}H_{17}N_3O_3S$, %: C 50.86; H 6.05; N 14.83.

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A NEW METHOD FOR THE SYNTHESIS OF 4-SUBSTITUTED sym-OCTAHYDROACRIDINES

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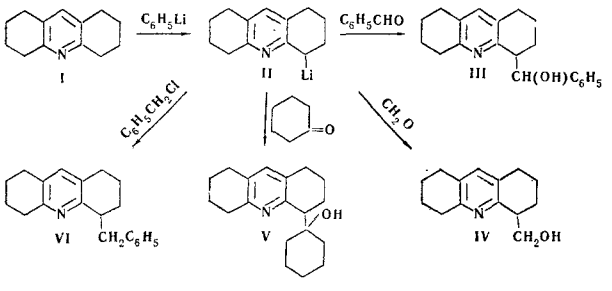
The direct introduction of substituents into position 4 of sym-octahydroacridine (I) was previously carried out by condensing it with aromatic aldehydes [1] and by the reaction of the N-oxide of this base with acetic anhydride [2]. The route proposed in the scheme has not been reported in the literature.



4-Lithio-sym-octahydroacridine (II) is formed by the slow mixing of dry ethereal solutions of I and phenyllithium at 20–25° C in an atmosphere of argon; on cooling to −10° C the compound deposits in the form of a pulverulent precipitate. The formation of III-VI takes place fairly smoothly in an atmosphere of nitrogen as the appropriate reactants are added to an ethereal solution of II. The structure of the carbinol III was confirmed by its dehydration to the known 4-benzylidene-sym-octahydroacridine [1]. The structure of IV was confirmed through its independent synthesis by the condensation of I with formaldehyde (with the participation of L. N. Donchak).

4-Lithio-sym-octahydroacridine (II). Red powder slowly carbonizing on heating. Found, %: Li 3.35, 3.36. Calculated for $C_{13}H_{16}LiN$, %: Li 3.59. On hydrolysis, the theoretical amount of I is formed.

4-Hydroxybenzyl-sym-octahydroacridine (III). Mp 147°–148° C (from petroleum ether). Found, %: C 81.41; H 7.92; N 5.08. Calculated for $C_{20}H_{23}NO$, %: C 81.80; H 7.92; N 4.77. IR spectrum (in CCl_4: band of O—H stretching vibrations at 3340 cm^{-1} and on dilution at 3650 cm^{-1}. **Picrate,** mp 161°–162° C (from aqueous ethanol). Found, %: N 10.82. Calculated for $C_{20}H_{23}NO \cdot C_6H_3N_3O_7$, %: N 10.72.

4-Hydroxymethyl-sym-octahydroacridine (IV). Mp 92°–93° C (from heptane). Found, %: C 77.23; H 9.08; N 6.61. Calculated for $C_{14}H_{19}NO$, %: C 77.39; H 8.82; N 6.45. IR spectrum (in KBr) band of O—H stretching vibrations at 3350 cm^{-1}. **Picrate,** mp 132°–133° C (from xylene). Found, %: N 12.89. Calculated for $C_{14}H_{19}NO \cdot C_6H_3N_3O_7$, %: N 12.55.

4-(1'-Hydroxycyclohexyl)-sym-octahydroacridine (V). Mp 88°–89° C (from acetone). Found, %: C 79.86; H 9.51; N 5.15. Calculated for $C_{19}H_{27}NO$, %: C 79.94; H 9.24; N 4.90. IR spectrum (in CCl_4): band of O—H stretching vibrations at 3350 cm^{-1}. **Picrate,** mp 151°–152° C (from isobutanol). Found, %: N 10.84. Calculation for $C_{19}H_{27}NO \cdot C_6H_3N_3O_7$, %: N 10.89.

4-Benzyl-sym-octahydroacridine (VI). Bp 142°–146° C (0.03 mm), n_D^{20} 1.5833. Found, %: C 86.78; H 9.04; N 5.01. Calculated for $C_{20}H_{23}N$, %: C 86.56; H 8.37; N 5.05. **Picrate,** mp 172°–173° C (from methanol). Found, %: N 11.21. Calculated for $C_{20}H_{23}N \cdot C_6H_3N_3O_7$, %: N 10.72.

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