Chemistry of Heterocyclic Compounds, Vol. 34, No. 10, 1998

SYNTHESIS OF PIPERIDINIUM 6-HYDROXY-6-METHYL-5-2-METHYLPHENYL)CARBAMOYL-4-(2-THIENYL)-3-CYANO-1,4,5,6-TETRAHYDROPYRIDINE-2-THIOLATE AND ITS CONVERSION TO 3-(2-THIENYL)-2-(4-PHENYLTHIAZOL-2-YL)ACRYLONITRILE

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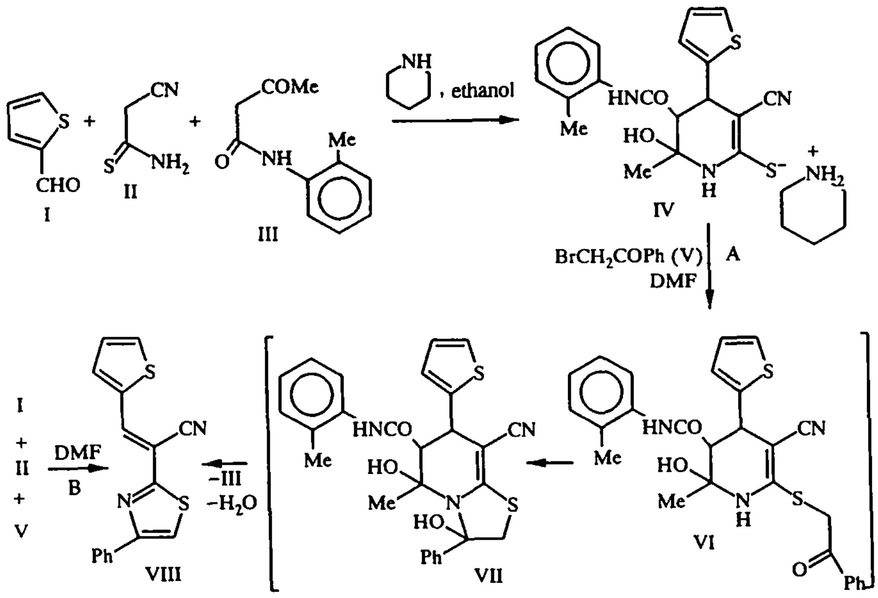
N-methylmorpholinium 4-aryl(hetaryl)-5-arylcarbamoyl-6-methyl-3-cyano-1,4-dihydropyridine-2-thiolates were described and some of their properties were investigated in [1-4]. The tetrahydropyridine analogs of these compounds are not known.

We obtained the substituted piperidinium tetrahydropyridine-2-thiolate (IV) for the first time by condensation of thiophenaldehyde (I), cyanothioacetamide (II), and N-acetoacetyl-*o*-toluidine (III) in ethanol in the presence of piperidine (~20°C). Its subsequent reaction with phenacyl bromide (V) in DMF at 20°C yielded substituted thiazole VIII through intermediates VI and VII, also obtained independently by mixing compounds I, II, and V in DMF.



6-Hydroxy-6-methyl-5-(2-methylphenyl)carbamoyl-4-(2-thienyl)-3-cyano-1,4,5,6-tetrahydropyridine-2-thiolate (IV). Yield of 79%. Mp = 150-152°C. IR spectrum: 3165-3300 (2NH, OH), 2190 sh, 2162 (CN), 1670 cm^{-1} (CO). PMR spectrum ($CDCl_3-DMSO-D_6$, 2:1): 1.65 (6H, m, $3CH_2$); 2.03 (3H, s, 6-Me); 2.31 (3H, s, Me); 2.80 (1H, d, ^3J = 12 Hz, $C_{(5)}H$); 3.02 (4H, m, CH_2NCH_2); 4.40 (1H, d, ^3J = 12 Hz, $C_{(4)}H$); 5.64 (1H, s, OH); 6.90-7.30 m and 7.60-7.90 m (7H, C_6H_4 and thienyl); 8.74 (1H, s, NH); 8.84 ppm (1H, s, CONH). Found, %: C 60.88; H 6.13; N 11.62; S 13.48. $C_{24}H_{30}N_4 \cdot O_2S_2$. Calculated, %: C 61.25; H 6.42; N 11.90; S 13.63.

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0009-3122/98/3410-1214$20.00

3-(2-Thienyl)-2-(4-phenylthiazol-2-yl)acrylonitrile (VIII). Yield of 81% (A), 79% (B). Mp = 156-158°C. IR spectrum: 2215 cm^{-1} (CN). PMR spectrum (DMSO-D_6): 7.43 m and 8.01 m (8H, Ph and thienyl); 8.25 (1H, s, thiazolyl); 8.60 ppm (1H, s, CH=). Found, %: C 64.99; H 3.29; N 9.60; S 21.65. $C_{16}H_{10}N_2S_2$. Calculated, %: C 65.28; H 3.42; N 9.52; S 21.78.

The research was supported by the Ministry of Education of Ukraine (code EK 1170).

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