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NOTES

Synthesis and Antibacterial Activity of Some 2-Acetamido-4-[2′-(2″, 6″-dinitro-4″-trifluoromethylphenoxy)-5′-methylphen-1′-yl]-6-substituted phenyl Pyrimidines

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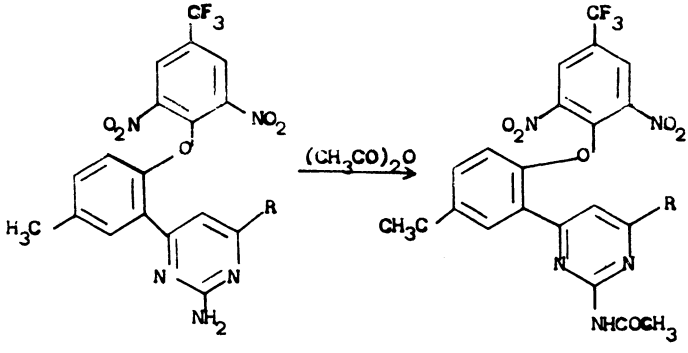
2-Acetamido-4-[2′-(2″,6″-dinitro-4″-trifluoromethyl phenoxy)-5′-methylphen-1′-yl]-6-substituted phenyl pyrimidines have been synthesised by the acetylation of 2-amino-[2′-(2″,6″-dinitro-4″-trifluoromethylphenoxy)-5′-methylphen-1′-yl]-6-substituted phenylpyrimidines with acetic anhydride. These compounds were screened for antibacterial activity against *S. aureus* and *E. coli*.

In continuation of our work, we report here the synthesis of some new 2-acetamido-[2′-(2″,6″-dinitro-4″-trifluoromethylphenoxy)-5′-methylphen-1′-yl]-6-substituted phenylpyrimidines (II). For the preparation of title compounds, 2-amino-4-[2′-(2″,6″-dinitro-4″-trifluoromethylphenoxy)-5′-methylphen-1′-yl]6-substituted phenylpyrimidines (I) were reacted with acetic anhydride (Scheme 1).

All melting points are uncorrected. IR spectra of the title compounds were taken on a Perkin-Elmer 377 spectrophotometer.



(I) (II)

Preparation of 2-acetamido-[2′-(2″,6″-dinitro-4″-trifluoromethylphenoxy)-5′-methylphen-1′-yl]-6-substituted phenylpyrimidines(II)

2-Amino-[2′-(2″,6″-dinitro-4″-trifluoromethylphenyl)-5′-methylphen-1′-yl]6-substituted phenylpyrimidines[1] (1 g) was heated with acetic anhydride (3 mL) on

a boiling water-bath for 1 h. The product, precipitated on addition of cold 50% ethyl alcohol (15 ml), was crystallized from ethylalcohol. ν_{max}(KBr): 500 (C—CF_3), 1540–1360 (NO_2), 1260–1040 (C—O—C), 1610 (C=N), 1680 (C=O) and 3400–3350 cm^{-1} (NH).

Compounds (II)	m.p. (°C)	Compounds(II)	m.p. (°C)
1. R = C_6H_5	116	9. R = 4-$CH_3C_6H_4$	87
2. R = 2-ClC_6H_4	99	10. R = 4-$C_2H_5C_6H_4$	93
3. R = 4-ClC_6H_4	120	11. R = 4-$C_3H_7C_6H_4$	104
4. R = 2,4-$(Cl)_2C_6H_3$	95	12. R = 2-$OCH_3C_6H_4$	134
5. R = 2,6-$(Cl)_2C_6H_3$	128	13. R = 3,4-$(OCH_3)_2C_6H_3$	113
6. R = 2-$NO_2C_6H_4$	99	14. R = 4-$N(CH_3)_2C_6H_4$	112
7. R = 3-$NO_2C_6H_4$	108	15. R = 3-OCH_3-4-OHC_6H_3	132
8. R = 4-$NO_2C_6H_4$	122		

Antibacterial activity

Total fifteen title compounds were tested for antibacterial activity by cup-plate method[2] using a species of gram positive bacteria *i.e. S. aureus* and gram negative bacteria *i.e. E. coli.* The testing was carried out in chloroform solution at a concentration of 50 mcg/d. The zone of the inhibition of test solution are recorded. From the experimental data, it was observed that most of these compounds were found to be active against both the bacteria.

ACKNOWLEGEMENT

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REFERENCES

1. S.R. Modi, H.D. Jahangirpuria, M.R. Patel and H.B. Naik, *Asian J. Chem.*, **6**, 945, 1061 (1994).
2. C.H. Collins, Microbiological Methods, Butterworths, London, p. 364 (1967).

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