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Synthesis of new derivatives of pyridazino[4,3-e][1,2,4]triazolo[3,4-b][1,3,4]thiadiazine

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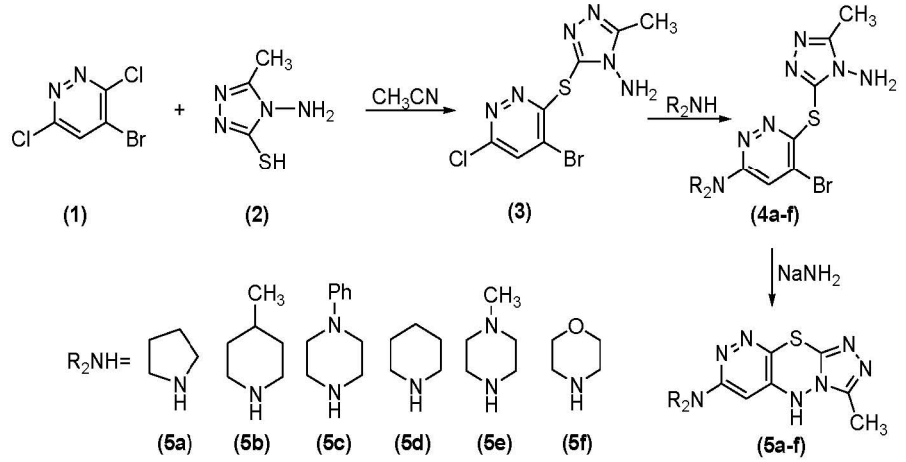
Triazoles and especially fused triazoles are also an important class of heterocyclic compounds with antifungal, anticonvulsant, herbicidal and antidepressant activities [1]. Pyridazinothiadiazines are also of interest as potential inhibitors of cyclic nucleotide phosphodiesterase[2], dyestuff [3], and precursors of herbicides [4]. In continuation of our interest in chemistry of fused heterocycles of pharmacological importance and exploration of their synthetic pathways, we decided to synthesize the new heterocyclic systems of pyridazino[4,3-e][1,2,4]triazolo[3,4-b][1,3,4]thiadiazine. In this study, the prepared ٤-bromo-٣،٦-dichloropyridazine was reacted with 1-amino-2-mercapto-5-methyl-1,2,3-triazole in acetonitrile which was subsequently treated with secondary amines and cyclized in the presence of sodium amide.



(1) (2) (3) (4a-f) (5a) (5b) (5c) (5d) (5e) (5f) (5a-f)

Reference:

[1] Sarges, S.; Howard, H. R.; Browne, R. G.; Lebel, L. A.; Seymour, P. A.; Koe, B. K.; J Med Chem 1990, 33, 2240.
[2] T. Naka,Y. Furukawa. Chem. Pharm. Bull., **27**, 1965 (1979).
[3] A. J. Elliot. US Patent 4,025,510. (1977).
[4] Nissan Chemical Industries. Jpn. Kokai 8171010, (1981).