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Abstract:

New pyrazolothienopyrimidines were synthesized. The key intermediate 4-aminothieno[2,3-c]pyrazole5-carbonitrile 1 was converted to the chloroacetyl amino derivative 2 followed by nucleophilic substitution and Dimorth rearrangement upon treatment with nitrogen nucleophiles to give the pyrimidinones 3a-c. Treatment of 3a with formaldehyde and with triethyl orthoformate afforded the respective tetracyclic derivatives 4 and 5. Condensation of the amino group in the o-aminocarbonitrile 1 with triethyl orthoformate followed by cycloaddition reaction with hydrazine led to the formation of pyrazolothienopyrimidine 8. Compound 8 was used as a synthetic precursor to heterocyclic compounds comprised of pyrazole, triazole, triazine, and triazepine derivatives.

Keywords:

imidazolyl, pyrazolothienopyrimidine, triazine, triazolo, synthesis.

Published In:

Heterocyclic communication , 25 , 39-46