

# THE USE OF ANILINODIHYDROFURANS IN THE SYNTHESIS OF NOVEL HETEROCYCLIC COMPOUNDS

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## Abstract

Alkyl 4-oxo-2-phenylamino-4,5-dihydrofuran-3-carboxylates were used for the preparation of alkyl 5-amino-7-aryl-2-{{aryl( hydroxy) methyl}( phenyl) amino}-4,6-dicyano-1-benzofuran-3-carboxylates, 4-oxo-2-phenylamino-N-(p-tolyl)-4,5-dihydrofuran-3-carboxamide, and ethyl 4-chloro-5-formyl-2-(phenylamino)furan-3-carboxylate. The latter was used for the synthesis of ethyl 4-chloro-5-(hydrazinylidenemethyl)-2-(phenylamino)furan-3-carboxylate and diethyl 5,5'-(hydrazine-1,2-diylidenemethylidene)bis[4-chloro-2-(phenylamino)furan-3-carboxylate].

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## Synthesis of Novel 1,2,3,4-Tetrahydrocarbazole Derivatives of Biological Interest

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### Abstract

2-Cyano-N-(tetrahydrocarbazole)acetamide (1) was utilized for the synthesis of several new arylazocarbazole derivatives (2a-e). Compound (1) reacted with phenyl isothiocyanate to yield the corresponding non-isolable intermediate (3), which gave, upon treatment with dilute hydrochloric acid, thiocarbamoyl derivative (4). Compound (3) reacted with chloroacetone, chloroacetic acid, chloroacetyl chloride, ethyl bromoacetate, and phenacyl bromide to afford thiazolone derivatives (6), (8), and (10), respectively. Compound (1) was heated in the presence of pyridine and/or hydrazine hydrate and/or isatine to give the corresponding tetrahydrocarbazole derivatives (13), (14), and (18), respectively. Supplemental materials are available for this article. Go to the publisher's online edition of Phosphorus, Sulfur, and Silicon and the Related Elements to view the free supplemental file.

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Author(s): ELGEMEIE, GEH; ELFAHHAM, HA; ELGAMAL, S; et al.

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Author(s): El-Shafei, Ahmed; Fadda, A. A.; Khalil, A. M.; et al.

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Author(s): GILMAN AE

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Author(s): Hudkins, RL; Diebold, JL; Angeles, TS; et al.

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Author(s): MUKERJEE, AK; ASHARE, R

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Author(s): Quiroga, J.; Insuasty, B.; Foces-Foces, C.; et al; Infantes, L; Maria, R.; Pilarcabildo, C.; Antonio Jimenez, J.; Elguero, J.

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Author(s): SLAETT J

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# THE USE OF 3-AMINO-4,6-DIMETHYLPYRAZOLO[3,4-b]PYRIDINE IN THE SYNTHESIS OF NOVEL HETEROCYCLES OF PHARMACEUTICAL INTEREST

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## Abstract

3-Amino-4,6-dimethylpyrazolo[3,4-b]pyridine was used for the preparation of some novel heterocycles of pharmaceutical interest. The starting material reacted with 2-cyano-3,3-bis(methylthio)acrylate, chloroacetyl chloride, phenyl isothiocyanate, carbon disulfide, and aromatic aldehydes to give the novel heterocycles. The structures of the hitherto unknown ring systems have been confirmed by analytical and spectral methods.

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## Synthesis of new purine, pteridine, and other pyrimidine derivatives

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### Abstract

The reaction of malononitrile dimer with phenyl isothiocyanate gave (6-amino-1-phenyl-2-thioxo-1,2,3,4-tetrahydropyrimidin-4-ylidene)malononitrile which was then used as starting material in the synthesis of pharmacologically important fused pyrimidine derivatives, such as 4-dicyanomethylidene-1.5-diphenyl-2thioxo-1,2,3,4-tetrahydropyrrolo[2,3-d]pyrimidine, 6-cyano-4-dicyanomethylidene-7-methylsulfanyl-5-oxo-lphenyl-2-thioxo-1,2,3,4,5,8-hexahydropyrido[2,3-d]pyrimidine, 6-dicyanomethylidene-3-phenyl-2-thioxo-1,2,3,6-tetrahydro-9H-purine, and 6-substituted 4-dicyanomethylidene-7-oxo-1-phenyl-2-thioxo-1,2,3,4,7,8-hexahydropteridines.

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## Thiazolidin-5-ones: Synthesis and reactions

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Fekry, A (Fekry, A)

### Abstract

Thiazolidin-5-ones and their derivatives have been long used as precursors for the synthesis of biologically active molecules. The general methods of preparations of thiazolidinones have been mentioned. The reactions of the title compounds are subdivided into groups that cover reactions to yield monoheterocycles.

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Author(s): BRADSHER, CK; BROWN, FC; SINCLAIR, EF  
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Author(s): COOK, AH; COX, SF

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Author(s): DANILA, G

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Author(s): DANILA, G

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Author(s): Danila, G; Radu, C

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Author(s): DAVIS, AC; LEVY, AL

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Author(s): GANTE, J; KIRCHLECHNER, R

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Author(s): GASHA, M; YAMAGUCHI, K; SAKURAI, Y; et al.

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Author(s): HARRIS, CR; TURNBULL, SA

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Inventor/Assignee: HIRAMITSU T

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Author(s): JEFFREYS, RA; KNOTT, EB

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Author(s): KRICHELD.HR

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Author(s): KRICHELD,HR

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Inventor/Assignee: MATSUI S

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Author(s): Metwally, MA; Keshk, EM; Fekry, A; et al.

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Author(s): Metwally, MA; Keshk, EM; Fekry, A; et al.

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Author(s): Mohamed, NR

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Author(s): MOHAREB, RM; SHERIF, SM

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Author(s): NEIDLEIN, R; HEGE, HG

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Author(s): PARMAR, SS; CHAUDHAR.A; GUPTA, TK; et al.

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Inventor/Assignee: POLLOCK JRA

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Inventor/Assignee: SILVA D

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Inventor/Assignee: YAMAGUCHI K

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