Graphical Abstract

Heterocycl. Commun. 6 (2008) 397-404

Facile Synthesis And Herbicidal Activities Of New Isoxazole Derivatives Via 1,3-Dipolar Cycloaddition Reaction

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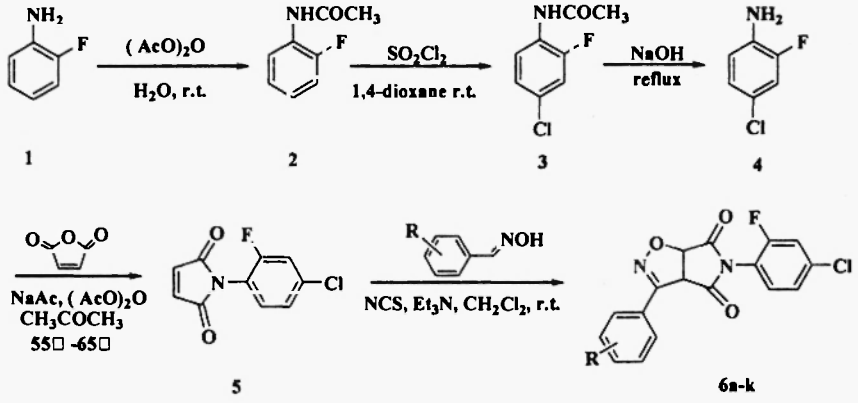

R=H, *o*-Cl, *p*-Cl, *o*-Br, *p*-Br, *o*-F, *p*-CH_3, *o*-OCH_3, *m*-OCH_3, *p*-OCH_3, 3,4-$(CH_3)_2$

Heterocycl. Commun.6 (2008) 405-408

Synthesis Of β-Sitosterol-Quercetin Dyads

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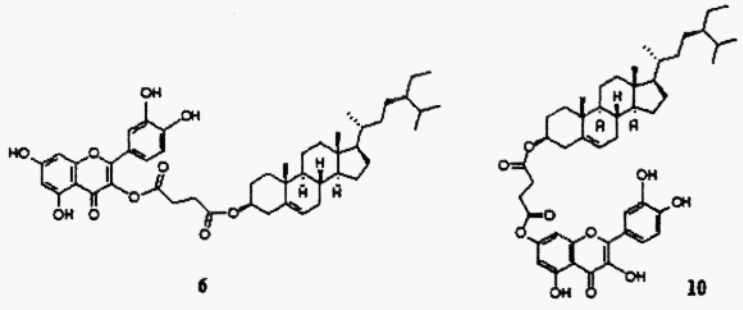
Synthesis of novel b-sitosterol-quercetin dyads 6 and 10 as serum cholesterol lowering agent is described. These compounds were prepared in good yields by the reaction of b-sitosterol and succinic anhydride, followed by the activation of the resulting acid compound by thionyl chloride, and finally by esterificationwith appropriate protected quercetins



β-sitosterol-quercetin dyads

Heterocycl. Commun.6 (2008) 409-418

Thermodynamic Study Of The Intraction Between Cryptand 222 And Tetracyanoethylene In Carbontetrachloride Solution

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Abstract: A spectrophotometric study concerning the interaction between 4, 7, 13, 16, 21, 24 -hexaoxa-1, 10 –diaza bicycle [8.8.8] hexacosane (cryptand C222) as n-donor and tetracyanoethylene (TCNE) as π-acceptor has been performed in carbontetrachloride solution at different temperatures. The results of job and mole ratio method are indicative of the formation of 1:1 charge transfer complex through an equilibrium reaction. The stability constants at different temperatures have been calculated from the computer fitting of absorbance-mole ratio data in MATLAB software. The ΔH^0 and ΔS^0 values are obtained by the Vant-Hoff method. The obtained data show that the complex is enthalpy stabilized and entropy destabilized. The solid complex was isolated and the effect of complexation on IR bands are discussed. The conductometric results indicate that none of the reactants and product do not alter the conductivity of solution and no free ion is formed through complexation.

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Synthesis and biological evaluation of novel substituted *N*-[1-benzyl-3-(3-*tert*-butyl carbamoyl-octahydroisoquinolin-2yl)-2-hydroxy-propyl]-2-[(2-oxo-*2H*-chromene-3-carbonyl)amino]succinamide analogs as anti-viral and anti-HIV agents

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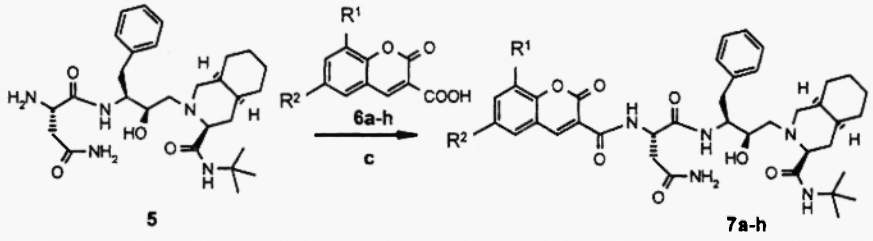

Heterocycl. Commun. 6 (2008) 427-432

Antibacterial and Fungicidal Activities of 1,6-Bis[(3-aryl)-1,2,4-triazolo[3,4-*b*]-[1,3,4]thiadiazole-6-yl] hexanes

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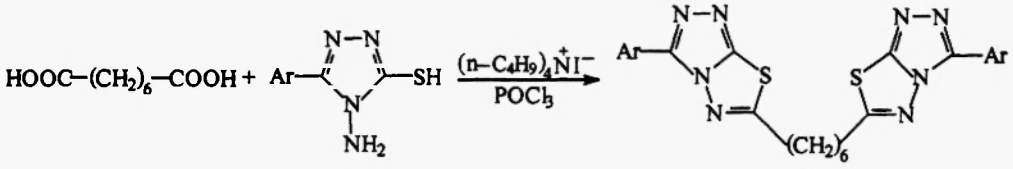
Fifteen new 1,6-bis[(3-aryl)-1,2,4-triazolo[3,4-b]-[1,3,4]thiadiazole-6-yl]hexanes were synthesized in high yields by reaction of 3-aryl-4-amino-5-mercapto-1,2,4-triazole with octanedioic acid in the presence of $POCl_3$ and tetrabutylammonium iodide as catalyst. The newly synthesized compounds were characterized by elemental analysis, IR, ^1H NMR and MS. The preliminary antibacterial tests showed that most of them were effective against *S.aureus*, *E.coli* and *B.subtilis*. 2b, 2c, 2d, 2n and 2o exhibited good fungicidal activities against *Cerospora beticola sacc.*



1 2

Heterocycl. Commun. 6 (2008) 433-442

Synthesis And Biological Screening Of Different Heterocycles Derived From 4-(Pyridine-2-Yl)Benzaldehyde

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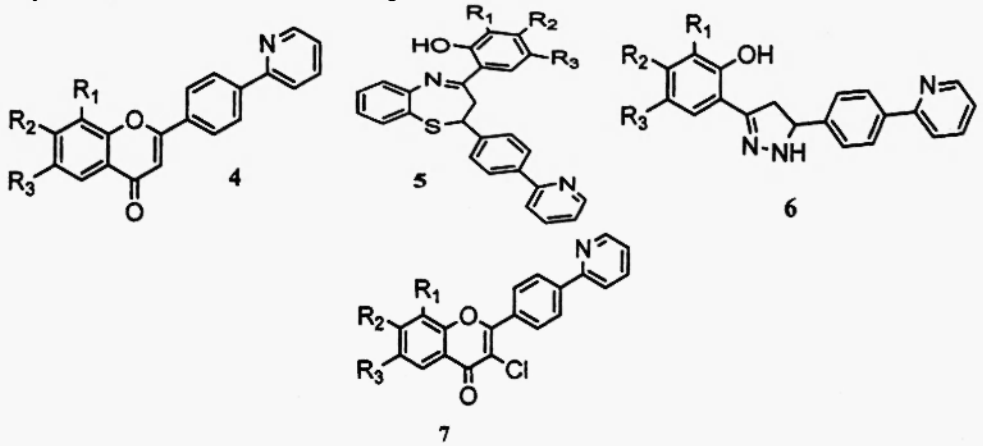
Various chalcones derived from 4-(pyridine-2-yl)benzaldehyde were converted into biologically important heterocycles. Synthesized compounds were tested for their antifungal and antibacterial activities.



4 5 6 7

Heterocycl. Commun. 6 (2008) 443-448

Efficient Synthesis Of Novel 6-Phenylthio-2,4-Disubstituted Pyrimidines

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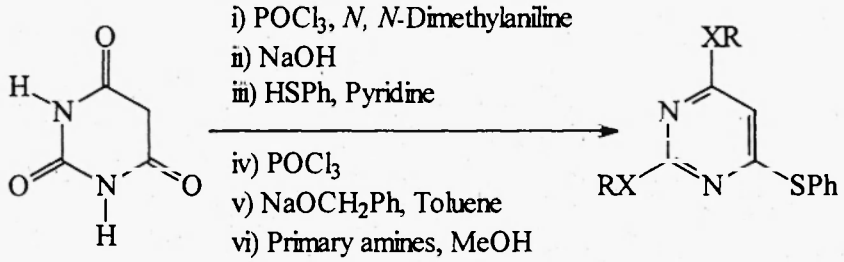
A facile method for the synthesis of 6-phenylthio-2,4-disubstituted pyrimidines starting from barbituric acid is described.



Heterocycl. Commun. 6 (2008) 449-452

Synthesis of 4,5-dihydro-3,4,4,5,5-pentasubstituted- *N*-tosyl-1*H*-pyrazoles

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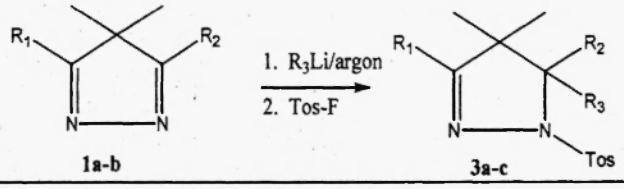

1a-b **3a-c**

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A second study - predicting the ^{13}C chemical shifts for a series of substituted-3-(4-methoxyphenyl)-2-phenyl-1,3-thiazolidin-4-ones

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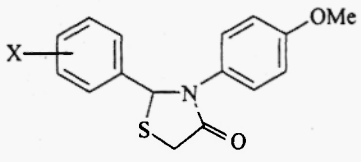

4: X = (a) *p*-NO_2, (b) *m*-NO_2, (c) *p*-F, (d) *m*-F, (e) *p*-Cl, (f) *m*-Cl, (g) *p*-Br, (h) *m*-Br, (i) H, (j) *p*-Me, (k) *m*-Me, (l) *p*-MeO, (m) *m*-MeO,

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Anodic ring-opening reaction of 4-phenyl-*2h*-phthalazin-1-one into Methyl *o*-(α-methoxy and α-cyano) benzyl-substituted benzoates

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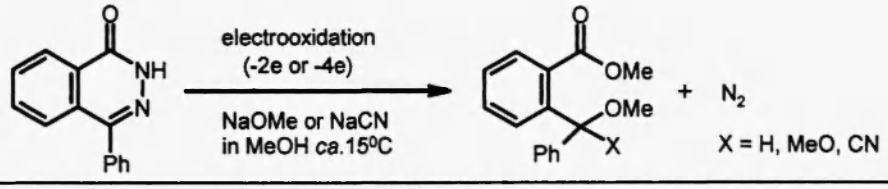
Heteroaromatic compound, 4-phenyl-*2H*-phthalazin-1-one that is easily prepared by condensation reaction of equimolar amount of methyl *o*-benzoyl benzoate and hydrazine hydrate was subjected to electrooxidation to undergo ring-opening reaction in MeOH containing NaOMe or NaCN as the supporting electrolyte. Some of the methoxylated and cyanated products obtained in this electrooxidation are novel compounds.



Heterocycl. Commun. 6 (2008) 465-468

Synthesis and Antibacterial Activities of Bis-1,3,4-oxadiazoline derivatives

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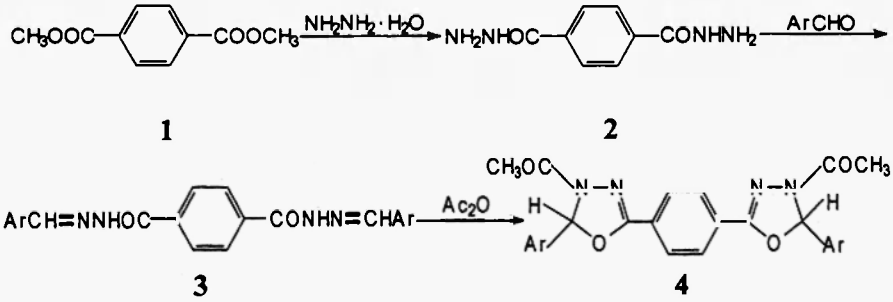
e-mail: lidejiang999@yahoo.com.cn

Dimethyl terephthalate (1) was reacted with 80% hydrazine hydrate in refluxing methanol for 12 h to afford terephthalate dihydrazide (2). Condensation of **2** with aromatic aldehydes afforded corresponding hydrazones **3a-3j**. Cyclization of **3a-3j** with acetic anhydride in refluxing for 4-5 h afforded bis-1,3,4-oxadiazoline derivatives(**4a-4j**). The structures of **4a-4j** were characterized by elementary analyses, IR, ^{1}H NMR, and MS spectroscopy. The preliminary antibacterial tests showed that most of them were effective against *S.aureus*.



Heterocycl. Commun. 6 (2008) 469-472

Cyclization Of 4-(2-Aminoanilino)-2-Benzylthiopyrimidine To Novel 1-(2-Benzylthiopyrimidin-4-Yi)-2-Substituted Benzimidazoles

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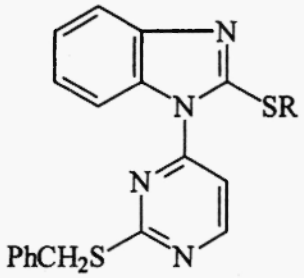
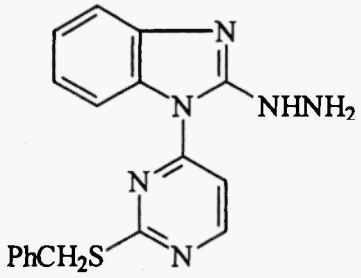
1-(2-Benzylthiopyrimidine-4-yl)-2-substitutedbenzimidazoles **6a-d** were prepared efficiently by the cyclization of 4-(2-aminoanilino)-2-benzylthiopyrimidine **5**.



6a-c



6d

R = CH_3, Et, CH_2Ph