

# Indian Journal of Chemistry

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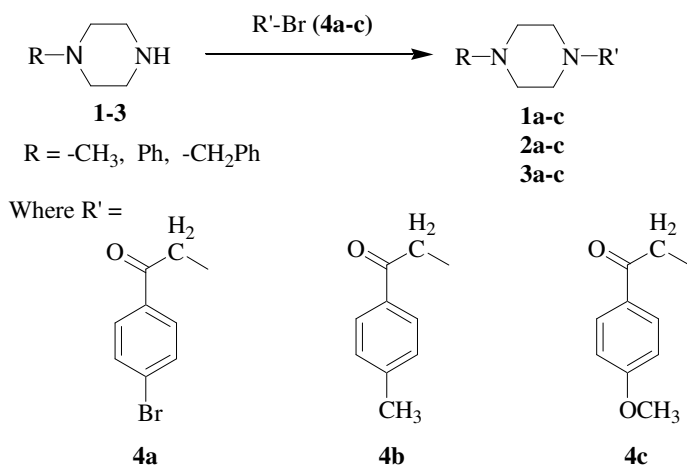
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#### Papers

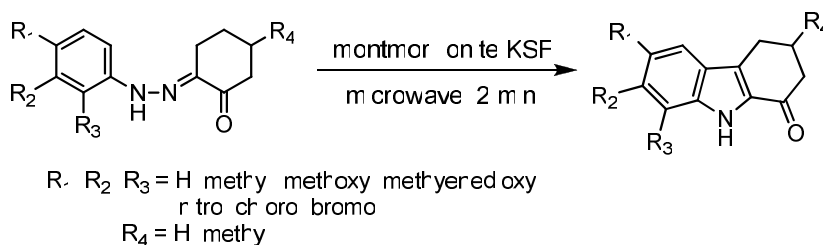
- 196 **Synthesis and *in vitro* antibacterial activity of *N*-alkyl and *N*-aryl piperazine derivatives** Synthesis and antibacterial evaluation of *N*-alkyl and *N*-aryl substituted piperazine derivatives against *S. mutans*, *S. aureus*, *B. subtilis*, *S. epidermidis* and *E. coli* bacterial strains have been carried out.



Krishna K Singh, Subhash C Joshi & Chandra S Mathela\*

Department of Chemistry, Kumaun University, Nainital 263 002, India

- 201 **Montmorillonite-KSF induced Fischer indole cyclization under microwave towards a facile entry to 1-keto-1,2,3,4-tetrahydrocarbazoles**

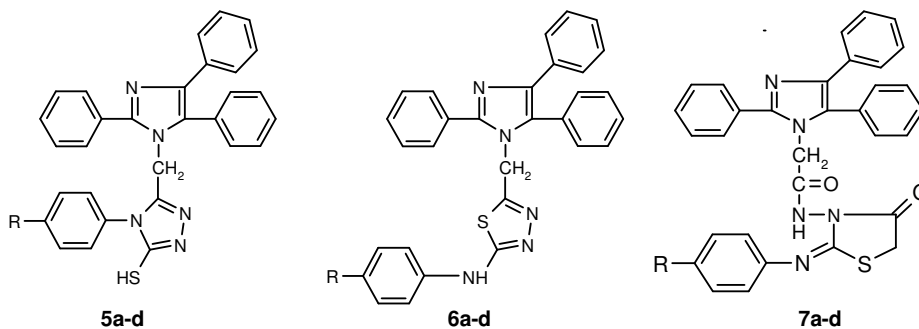


Suchandra Chakraborty, Gautam Chattopadhyay & Chandan Saha\*

Department of Clinical and Experimental Pharmacology, School of Tropical Medicine, Kolkata 700 073, India

207 **Design and synthesis of some azole derivatives containing 2,4,5-triphenyl imidazole moiety as anti-inflammatory and antimicrobial agents**

A series of azole derivatives (**5a-d**, **6a-d** and **7a-d**) have been synthesized from (2,4,5-triphenyl-imidazole-1-yl)-acetic acid hydrazide under various reaction conditions. Elemental analysis, IR,  $^1\text{H}$  NMR and mass spectral data confirmed the structure of the newly synthesized compounds. All the synthesized azole derivatives have been investigated for their anti-inflammatory, antibacterial and antifungal activities and showed moderate to good activity.

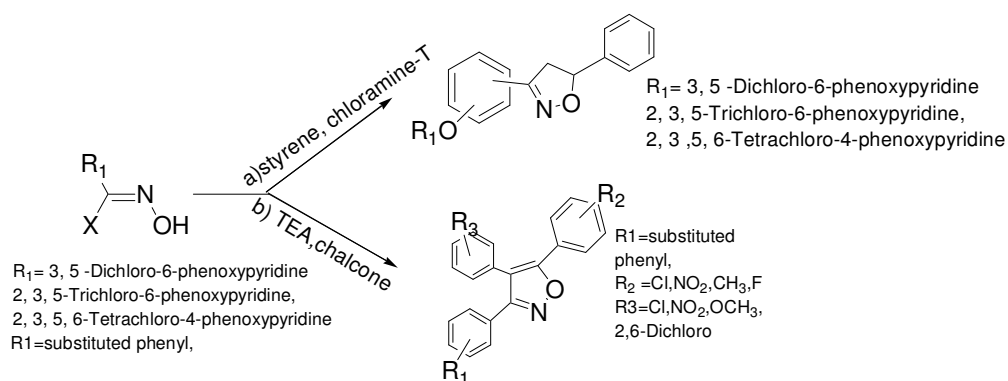


Mohd Amir\*, Iftikhar Ahsan, Wasim Akhter, S A Khan & Israr Ali

Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Hamdard University, New Delhi 110 062, India

214 **Synthesis of novel 3, 5-disubstituted-4,5-dihydroisoxazoles and 3,4,5-trisubstituted isoxazoles and their biological activity**

1,3-Dipolar cycloaddition of nitrile oxide generated from substituted pyridinyloxy benzaldoximes with styrene or  $\alpha,\beta$ -unsaturated ketones produces a series of 3,5-disubstituted-4,5-dihydroisoxazoles and 3,4,5-trisubstituted isoxazoles. On the other hand C-chlorooxime reacts with  $\alpha,\beta$ -unsaturated ketones yielding 3,4,5-trisubstituted isoxazoles. The compounds are tested for antimicrobial activity and action on isolated frog heart.

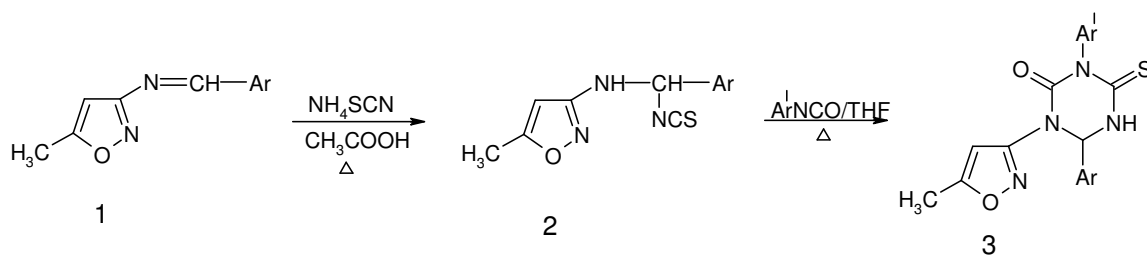


M Shailaja, A Manjula, B Vittal Rao\*, B Praseeda & B Madhava Reddy

Organic Chemistry Division II, Indian Institute of Chemical Technology, Hyderabad 500 607, India

**223** Synthesis and antimicrobial activity of 1-(5-methyl-3-isoxazolyl)-3,6-diaryl-4-thioxo-1,3,5-triazinan-2-ones

Treatment of 3-benzalamino-5-methylisoxazoles **1** with ammonium thiocyanate in hot acetic acid affords the corresponding *N*-isothiocyanato(phenyl)methyl-*N*-(5-methyl-3-isoxazolyl)amines **2a-j** in excellent yields. *N*-Isoxazolyl- $\alpha$ -aminoisothiocyanates **2a-j** on reaction with aryl isocyanates undergoes cyclization to give the corresponding isoxazolyl-4-thioxo-1,3,5-triazinan-2-ones **3a-l** in good yields. The compounds **2a-j** and **3a-l** have been screened for their antimicrobial activity.



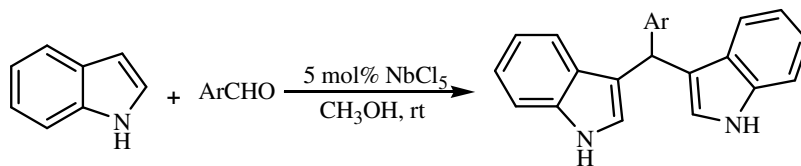
**E Rajanarendar\*, S Raju, M Nagi Reddy & K Govardhan Reddy**

Department of Chemistry, Kakatiya University, Warangal 506 009, India

**Notes**

**229** Niobium(V) pentachloride-catalyzed efficient and highly rapid synthesis of bis(indolyl)methanes under mild conditions

$\text{NbCl}_5$  has been found to be an extremely efficient catalyst for electrophilic substitution reaction of indole with various aromatic aldehydes at room temperature, to afford the corresponding bis(indolyl)methanes in good yields.

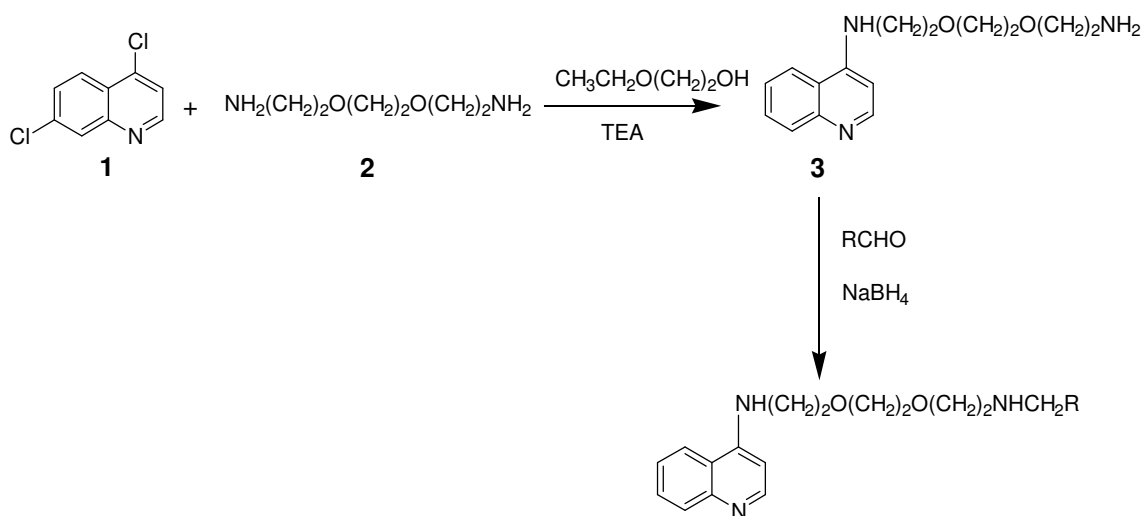


**Mazaahir Kidwai\*, Nisha Bura & Neeraj Kumar Mishra**

Green Chemistry Research Laboratory, Department of Chemistry, University of Delhi, Delhi 110 007, India

233 **Synthesis and antimalarial activity of novel N-[2-[2-(2-aminoethoxy) ethoxy] ethyl]-7-chloroquinolin-4-amine and its derivatives**

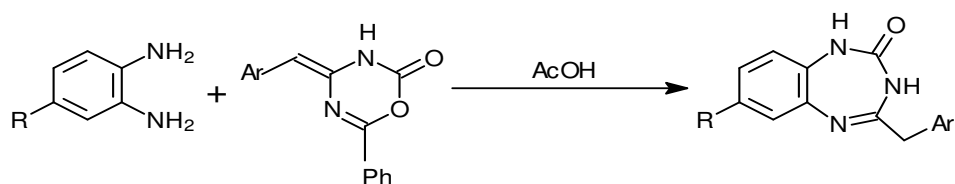
A number of N-[2-[2-(2-aminoethoxy)ethyl]-7-chloroquinolin-4-amine derivatives have been prepared by condensation of N-[2-[2-(2-aminoethoxy) ethoxy] ethyl]-7-chloroquinolin-4-amine with substituted aldehyde and characterized by IR,  $^1\text{H}$  and  $^{13}\text{C}$  NMR, and mass spectral data. These compounds have been screened for *in vitro* antimalarial activity using the Sybr Green assay of *P. falciparum* in culture and the heme detoxification based Heme-HRP assay. 7-Chloro-N-[2-(2-[2-(2,4-difluoro benzyl) amino] ethoxy) ethoxy] quinolin-4-amine has been found to be the most effective with  $\text{IC}_{50}$  value  $60\ \mu\text{M}$  (in Heme-HRP assay) and  $48\ \text{nM}$  (in *P. falciparum* culture assay). These values compare well with the potency of chloroquine in the respective assays.



Pooja Tanwar, Gyan Chand Yadav\*, U K Jaitley, Naveen Kaushik & Dinkar Sahal

Ranbaxy Research Laboratories, Process Research & NCE Scale Up, Gurgaon 122 001, India

242 **Synthesis of 4-(substituted benzyl)-1H, 3H-benzotriazin-2-ones**

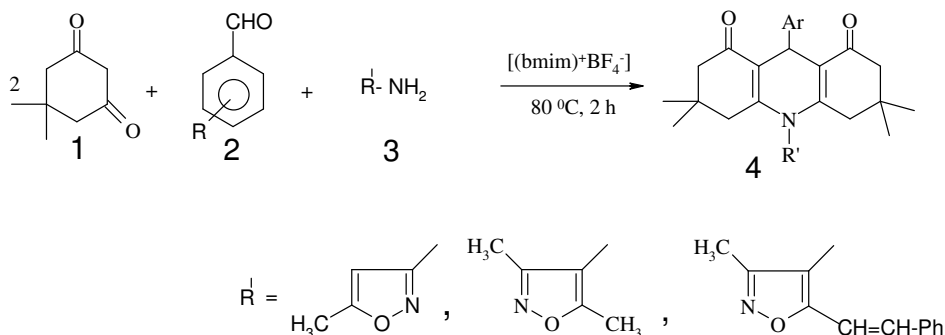


T Venkata Maruthikumar, G V Panakala Rao, V Prabhakar Reddy & P Hanumantha Rao\*

Department of Chemistry, Post Graduate College of Science, Saifabad, Osmania University, Hyderabad 500 004, India

**245 An efficient one-pot three component synthesis of new isoxazolyl polyhydroacridine-1,8-diones in an ionic liquid medium**

A facile and convenient protocol was developed for the fast and high yielding one-pot three component synthesis of isoxazolyl polyhydroacridine-1,8-diones from dimedone, aromatic aldehyde and isoxazolyl amine in the presence of ionic liquid  $[(\text{bmim})^+\text{BF}_4^-]$  as an efficient recyclable medium.

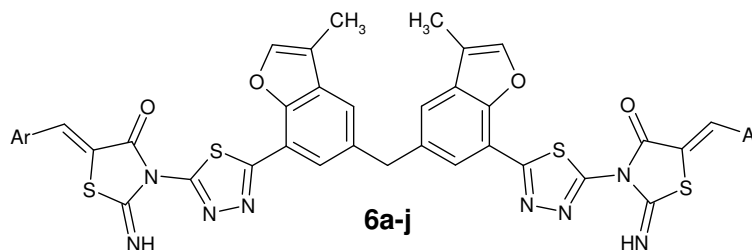


**E Rajanarendar\*, M Nagi Reddy & Firoz Pasha Shaik**

Department of Chemistry, Kakatiya University, Warangal 506 009, India

**253 Synthesis and antimicrobial activity of bis-[2-imino-3-[5-(3-methylbenzo[*b*]furan-7-yl)-1,3,4-thiadiazol-2-yl]-5-(arylidene)-1,3-thiazolan-4-one]methanes **6a-j****

A series of novel bis-[2-imino-3-[5-(3-methylbenzo[*b*]furan-7-yl)-1,3,4-thiadiazol-2-yl]-5-(arylidene)-1,3-thiazolan-4-one]methanes **6a-j** have been synthesized and their structures confirmed by IR, NMR, MS and elemental analyses. All the synthesized compounds have been tested for their antimicrobial activity against Gram-positive and Gram-negative bacteria, and fungi. Among the synthesized compounds, **6c**, **6e**, **6f** and **6g** are found to be the most active against *Bacillus subtilis*, *Bacillus sphaericus*, *Staphylococcus aureus*, *Klebsiella aerogenes* and *Chromobacterium violaceum*. Similarly, these compounds show potent antifungal effect against *Candida albicans*, *Aspergillus fumigatus*, *Trichophyton rubrum* and *Trichophyton mentagrophytes*.



**Ch Sanjeeva Reddy\*, D Chandrashekar Rao, V Yakub & A Nagaraj**

Department of Chemistry, Kakatiya University, Warangal 506 009, India

**260 Additions and Corrections**

Authors for correspondence are indicated by (\*)