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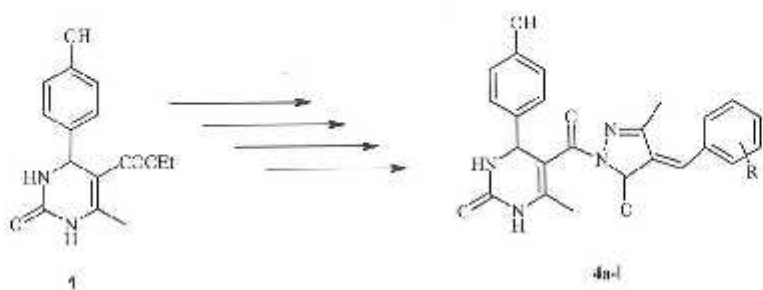
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### Papers

- 643 **Synthesis of novel pyrimidine and pyrazole hybrids as potential antimicrobial agents** A series of novel 5-(4-arylidene-2-methyl-5-oxo-4,5-dihydro-1*H*-pyrazole-1-carbonyl)-4-(4-hydroxyphenyl)-6-methyl-3,4-dihydropyrimidin-2(1*H*)-ones **4a-l** have been synthesized and evaluated for their *in vitro* antimicrobial activity.

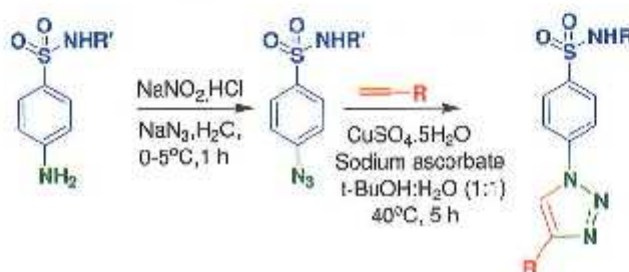


R = -H, -2-F, -4-F, -2-Cl, -4-Cl, -4-Cl, -2-NC<sub>2</sub>, -2-NC<sub>2</sub>, -4-NC<sub>2</sub>, -2,6-Cl<sub>2</sub>, -2-OCH<sub>3</sub>, -4-CCH<sub>3</sub>

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- 650 **Synthesis and antibacterial evaluation of novel sulfonamide based [1,2,3]-triazoles** A new series of sulfonamide based [1,2,3]-triazoles have been synthesized *via* click chemistry and evaluated for their *in vitro* antibacterial efficacy against two Gram negative bacteria *viz.* *E. coli* and *S. typhi* and one Gram-positive bacterium *viz.* *S. mutans*.

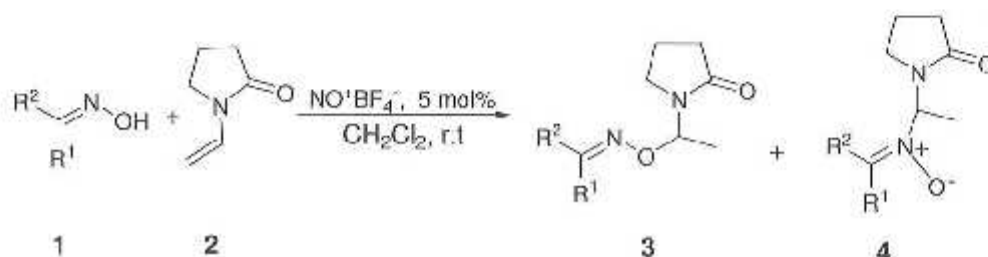


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656 Nitrosonium ( $\text{NO}^+$ ) initiated *O*-alkylation of oximes with *N*-vinylpyrrolidinone

An efficient *O*-alkylation of oximes with *N*-vinylpyrrolidinone was achieved using nitrosonium tetrafluoroborate as a catalyst, giving oxime ethers in good to excellent yields.

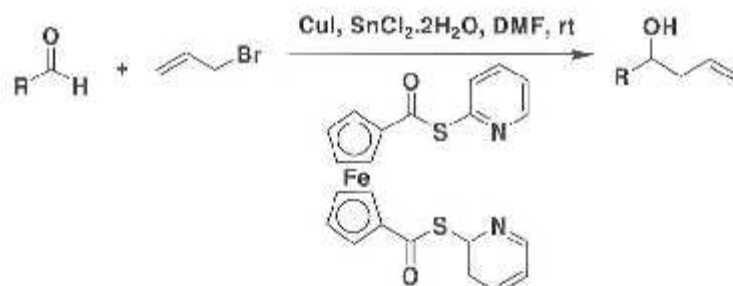


Guai Li Wu\*, Jian Liu, Yanli Wei, Yong Jiang Chen & Long Min Wu

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662 CuI catalyzed Barbier type allylation of aldehyde in presence of  $S^1,S^2$ -dipyridin-2-yl ferrocene-1,1'-dicarbothioate as ligand

Ferrocene based ligand  $S^1,S^2$ -dipyridin-2-yl ferrocene-1,1'-dicarbothioate has been prepared and successfully used for CuI catalyzed Barbier type allylation of aldehydes mediated by  $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ .



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**Synthesis of 3,4-dihydropyrimidin-2(1H)-ones (DHPMs) by natural L-ascorbic acid**

Extremely facile, environment friendly and solvent free method for the synthesis of dihydropyrimidones (DHPMs) by naturally occurring L-ascorbic acid (Lemon juice- three drops) in microwave at 120°C has been described.

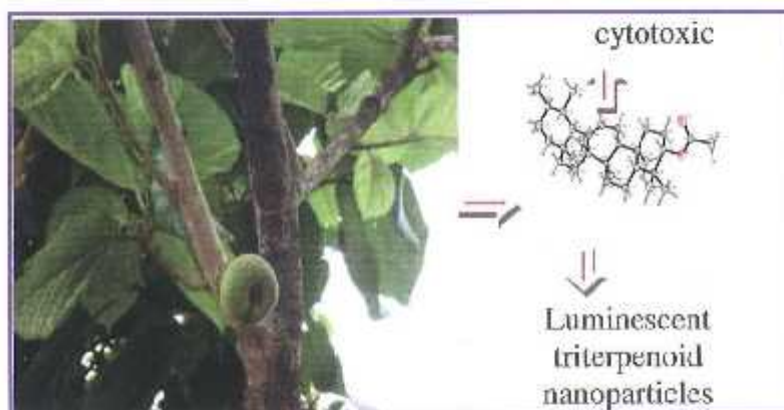
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676

**Cytotoxic triterpenoids from *Ficus pomifera* Wall.**

3 $\beta$ -Acetoxyurs-12-ene **1**, 3 $\beta$ -hydroxyurs-12-ene **2** and three other triterpenoids, 3 $\beta$ -hydroxyurs-12-en-27-oic acid **3**, 3 $\beta$ -hydroxyolean-12-en-27-oic acid **4** and 3 $\alpha$ -acetoxyolean-12-en-27-oic acid **5** have been isolated from *Ficus pomifera* Wall. Their chemical structures have been established by spectroscopic analysis. The structure of compound **1** is confirmed with single-crystal X-ray analysis. Compound **1** has been characterised for properties such as particle size and photoluminescence with fluorescence spectroscopy and transmission electron microscopy (TEM) for applications comparable to those of nanocomposites. The size has been characterised in the range of nanoparticles, and the compound exhibits fluorescence. Compounds **1** and **2** show cytotoxic activity in an MTT assay on human lung cancer cell line A549, exhibiting IC<sub>50</sub> values of 15  $\mu$ g/mL and 3  $\mu$ g/mL, respectively.



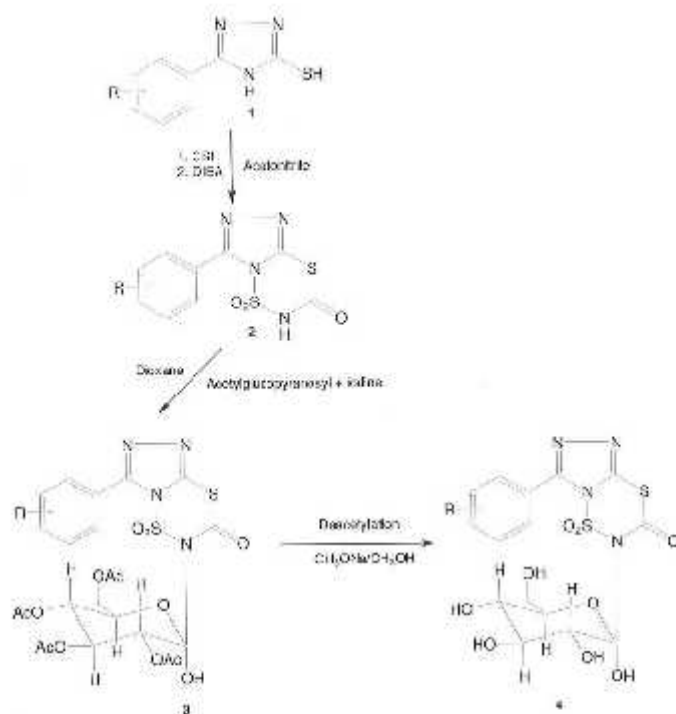
Sujata D Wangkheirakpam, Amey Wadawale, Surendrajit S Leishangthem, Jitendra S Gurumayum & Warjeet S Laltonjam\*

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## Notes

682 Synthesis and fungicidal activity of some 8-aryl-3-( $\beta$ -D-glucopyranosyl)-4-oxo-4*H*,5*H*-1,2,4-triazolo-[4,3-*b*]-1,4,2,6-dithiadiazine-1,1-dioxides

8-Aryl 3-( $\beta$ -D-glucopyranosyl)-4-oxo-4*H*,5*H*-1,2,4-triazolo-[4,3-*b*]-1,4,2,6-dithiadiazine-1,1-dioxides **4** have been conveniently prepared from 8-aryl-4-oxo-4*H*,5*H*-1,2,4-triazolo-[4,3-*b*]-1,4,2,6-dithiadiazine-1,1-dioxides **2** by reaction of  $\beta$ -D-1,2,3,4,6-penta-O-acetylglucopyranose and iodine followed by deacetylation with sodium methoxide in methanol. Synthesised compounds have been tested *in vitro* for their antifungal activity.

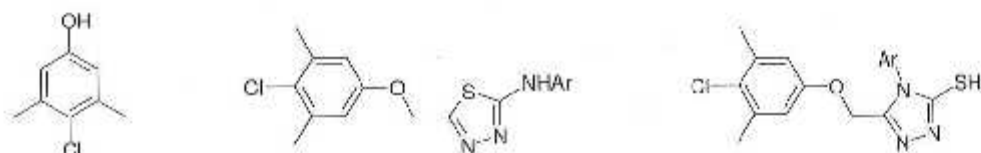


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687 Novel thiadiazoles and triazoles from 4-chloro-3,5-dimethylphenol and their *in vitro* antibacterial screening

4-Chloro-3,5-dimethylphenol exhibits bactericidal properties. Its 1,3,4-thiadiazole and 1,2,4-triazole derivatives have been prepared. These novel compounds are characterized with the help of spectral techniques like IR, <sup>1</sup>H NMR and mass spectrometry. These novel compounds have been screened *in vitro* for their antimicrobial activities.

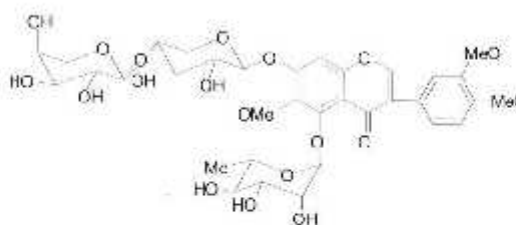


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691 **Bioactive chemical constituents from the leaves of *Lantana Camara* L.**

New compound **1** (Gautin), a new flavone glycoside with a unique aglycone moiety, with five flavone, acacetin-7-O- $\beta$ -D-rutinoside **2**, Tricin **3**, Hispidulin **4**, 3,5,7,8-tetra hydroxyl-6,3'-dimethoxy flavones **5** and Pectolarigenin **10** and also six terpenoids (25S)-spirostan-5-ene-3 $\beta$ -21-diol-3-O- $\alpha$ -L-rhamnopyranosyl-(1,2)-[ $\alpha$ -L-rhamnopyranosyl-(1,4)]- $\beta$ -D-glucopyranoside **6**, Ursolic acid **7**, Lantanilic acid **8**, Icterogenin **9**, Betulonic acid **11** and Betulinic acid **12** have been isolated from the dried leaves of *Lantana camara* L. The structure of compound **1** (Gautin) has been assessed by spectroscopic analysis as 5,7-dihydroxy-6,3',4'-trimethoxy isoflavone-5-O- $\alpha$ -L-rhamnopyranosyl-7-O- $\beta$ -D-arabinopyranosyl-(1 $\rightarrow$ 4)-O- $\beta$ -D-xylopyranoside. Three flavones **1**, **2**, **5** and one terpenoid **11** are isolated for the first time from this plant.



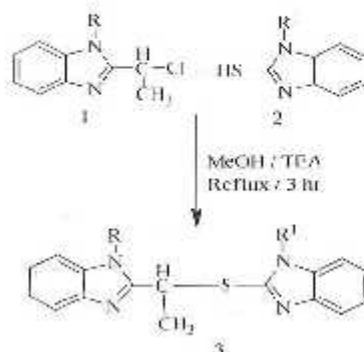
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698 **Synthesis of symmetrically / unsymmetrically substituted bisbenzimidazolesulphides of potential pharmacological interest**

Symmetrical and unsymmetrically disubstituted bisbenzimidazole sulphides **3b-g** have been synthesized from the condensation of substituted benzimidazole thiol **1** and substituted 2-chloromethyl benzimidazole **2**.



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