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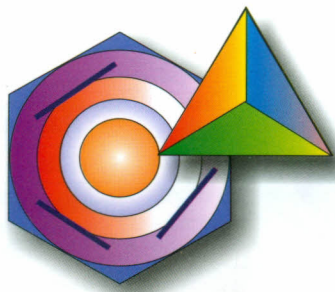
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# Indian Journal of Chemistry

## Section B

31

(Organic including Medicinal)



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# Indian Journal of Chemistry

Sect. B: Organic Chemistry including Medicinal Chemistry

VOL. 58B

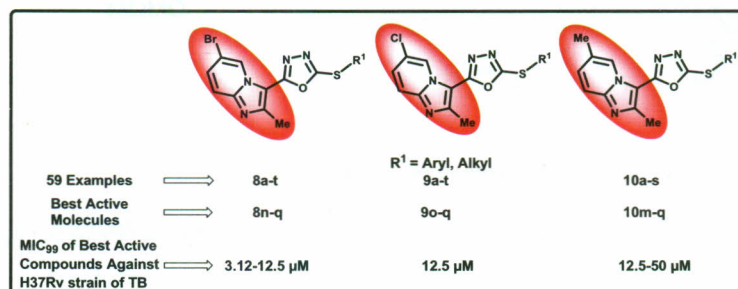
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### Papers

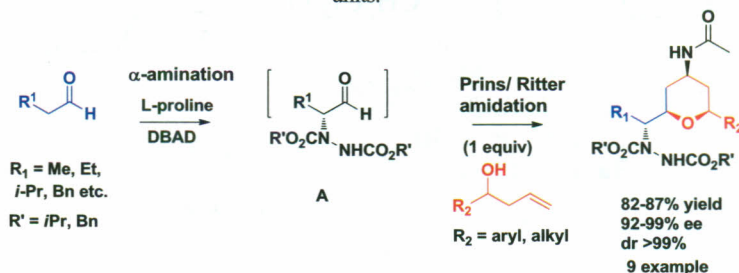
- 1005** Synthesis of 1,3,4-oxadiazole and imidazo[1,2-*a*]pyridine based molecular hybrids and their *in vitro* antituberculosis and cytotoxicity studies
- 1,3,4-Oxadiazole substituted imidazo[1,2-*a*]pyridine based molecular hybrids have been synthesized and evaluated against *Mycobacterium tuberculosis* H37Rv. Out of 59 compounds synthesized, ten compounds show activity in the range of 3.125-12.5  $\mu$ M.



Shiv Shyam Maurya, Tannu Priya Gosain, Saqib Kidwai, Ramandeep Singh & Diwan S Rawat\*

Department of Chemistry, University of Delhi, Delhi 110 007, India

- 1019** Proline catalyzed sequential  $\alpha$ -amination/ Prins/ Ritter amidation of aldehydes: New method of construction of tetrahydropyran units
- An efficient "one-pot" synthetic method toward highly substituted tetrahydrofuran (THF) units is reported. The key transformation involves an atom-efficient sequential proline catalyzed  $\alpha$ -amination of aldehydes to give  $\alpha$ -aminated aldehydes *in situ* and the subsequent cyclomerization with homoallylic alcohols under Prins/Ritter conditions. Notably, this method provides access to enantiopure 1,2-*syn* and 1,4-*anti* diaminoalcohols *via* reductive ring opening of THP units.

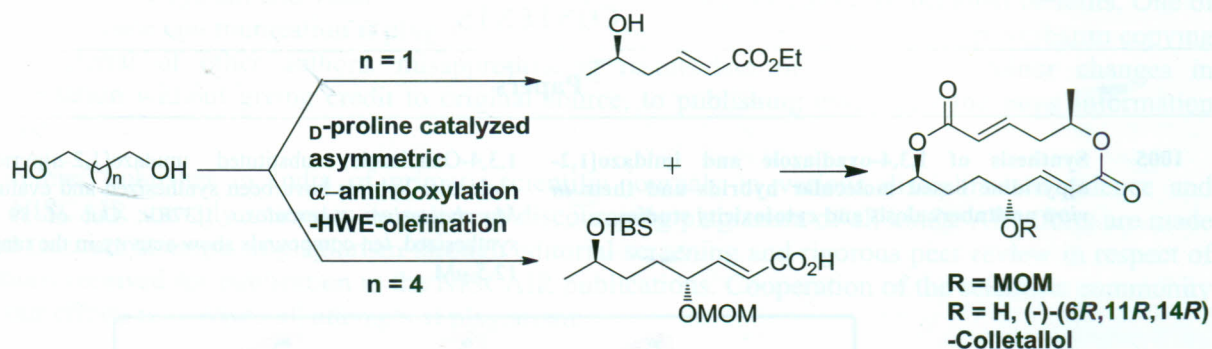


Brijbhushan Ahuja, Sunita Gadakh & Arumugam Sudalai\*

Chemical Engineering and Process Development Division, CSIR-National Chemical Laboratory, Dr. Homi Bhabha Road, Pune 411 008, India

- 1029 A concise formal synthesis of (-)-(6*R*,11*R*,14*R*)-Colletalol via D-proline catalysed  $\alpha$ -amino-oxylation-Wittig olefination strategy

An efficient enantioselective formal synthesis of marine macrolide (-)-(6*R*,11*R*,14*R*)-colletalol has been achieved starting from commercially available raw materials. The key reactions include the D-prolinecatalyzed  $\alpha$ -aminoxylation of aldehyde followed by Horner-Wardsworth-Emmons olefination in a sequential fashion to give the macrolide key intermediate **5** in high enantiomeric purity (97% *ee*) and high overall yield (32%).

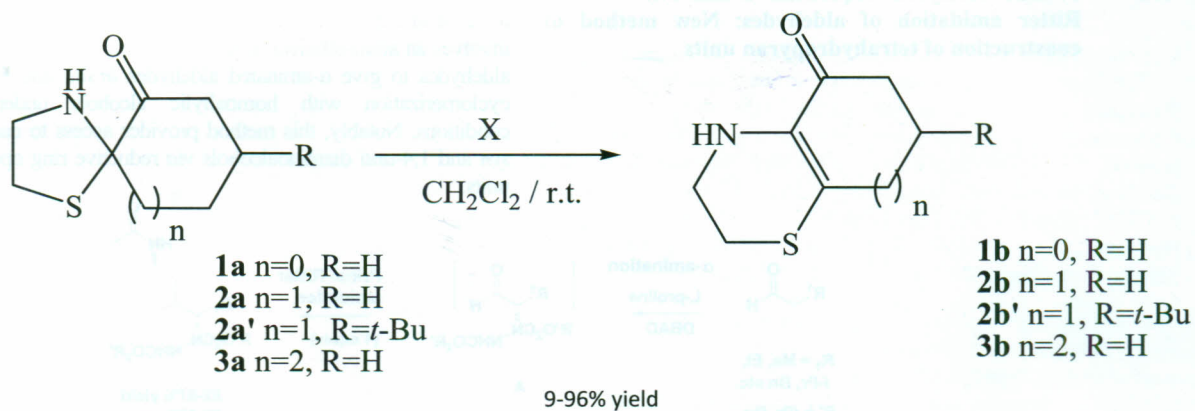


Soumen Dey, Sunita Gadakh & Arumugam Sudalai\*

Chemical Engineering and Process Development Division, CSIR-National Chemical Laboratory,  
Dr. Homi Bhabha Road, Pune 411 008, India

- 1037 Synthesis of dihydro-1,4-thiazine from  $\alpha$ -keto spiro-thiazolidine

The reaction of 1-thia-4-azaspiro[4.5]alkan-6-one with bromine, iodine, copper (II) salts, acid or base gives dihydro-1,4-thiazine derivatives in moderate to good yields.

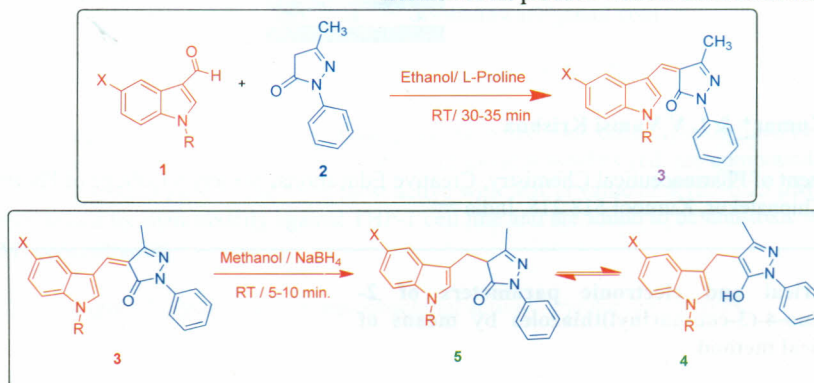


Takamitsu Utsukihara\*, Masatoshi Matsushita, Eri Miyamoto, Hikaru Murakami & C Akira Horiuchi

Hakodate National College of Technology, Tokura-cho, Hakodate 042-8501, Japan

**1042 Facile synthesis of 4-((5-substituted-1*H*-indol-3-yl)methyl)-3-methyl-1-phenyl-1*H*-pyrazol-5-ols by selective reduction**

5-Bromo-1*H*-indole-3-carbaldehyde (**1a**) has been condensed with 3-methyl-1-phenyl-1*H*-pyrazol-5(4*H*)-one (**2**) in ethanol containing *L*-Proline as a catalyst at RT in just 0.5 h to form the Knoevenagel condensation product **3a**, *i.e.*, (*Z*)-4-((5-bromo-1*H*-indol-3-yl)methylene)-3-methyl-1-phenyl-1*H*-pyrazol-5(4*H*)-one. The latter undergoes chemoselective reduction with sodium borohydride in methanol at RT, in just 5 min, to give the title compound **4a**, *i.e.*, 4-((5-bromo-1*H*-indol-3-yl)methyl)-3-methyl-1-phenyl-1*H*-pyrazol-5-ol. The reactions are found to be general and have been extended to other derivatives of **1** leading to various **3** and **4**. Both the reactions *i.e.* condensation and subsequent reduction, have many advantages like shorter reaction times, good yields of the products formed, and isolation of the products without the need for column chromatography.

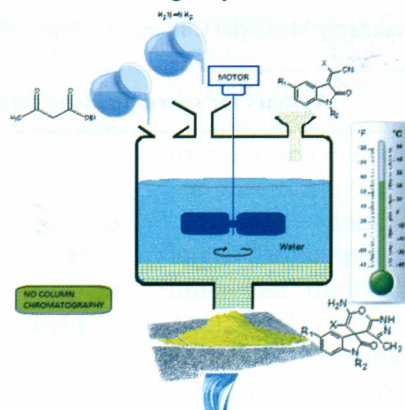


**Gaddam Ganga Reddy, Chittireddy Venkata Ramana Reddy\* & Pramod Kumar Dubey**

Department of Chemistry, Jawaharlal Nehru Technological University Hyderabad  
College of Engineering, Kukatpally, Hyderabad 500 085, India

**1049 Green and rapid synthesis of spiro[indoline-3,4'-pyrano[2,3-*c*]pyrazoles] in water: A practical method for large-scale synthesis**

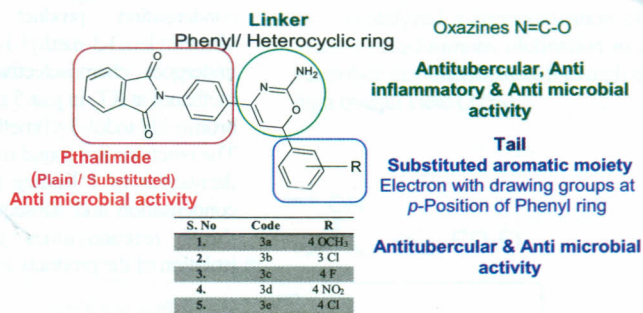
Medicinally useful and structurally complex spiro[indoline-3,4'-pyrano[2,3-*c*]pyrazole] derivatives have been synthesized by one-pot three component reaction in water at room temperature with high atom economy with short reaction time. The current report offers an environmentally benign protocol for obtaining the desired product in good yield and exclusion of conventional purification processes.



**Khadhar Navaz Umar Basha, Panneer Selvam Nagarajan & Shanthi Gnanamani\***

Centre for Advanced Organic Materials, Department of Chemistry, Sona College of Technology,  
Junction Main Road, Salem 636 005, India

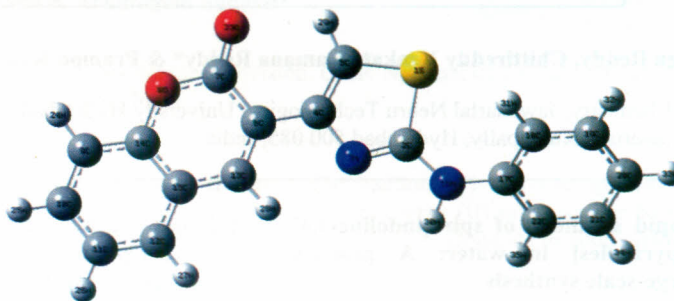
- 1056 Design, docking, synthesis and biological evaluation of novel isoindole-1,3-(2H)-diones



T Raj Kumar\* & L V Vamsi Krishna

Department of Pharmaceutical Chemistry, Creative Educational Society's College of Pharmacy, NH-7, Chinnatekur, Kurnool 518 218, India

- 1063 Geometrical and electronic parameters of 2-arylamino-4-(3-coumarinyl)thiazoles by means of theoretical method



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Department of Chemistry, Nesamony Memorial Christian College, Marthandam 629 165, India

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