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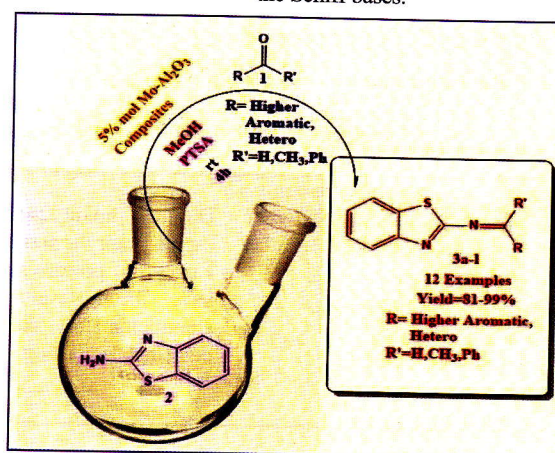
FEBRUARY 2023

CONTENTS

Papers

- 91 **Synthesis of Schiff bases of 2-amino benzo[d]thiazole from higher hetero aldehydes and ketones using Mo-Al₂O₃ composite-based organocatalyst**

More than 90% yields of 2-amino benzo[d]thiazole based Schiff bases were synthesized by Mo-Al₂O₃ green catalyst assisted condensation at room temperature. They are characterized by their analytical and spectroscopic data and these data are fully supported for formation the Schiff bases.

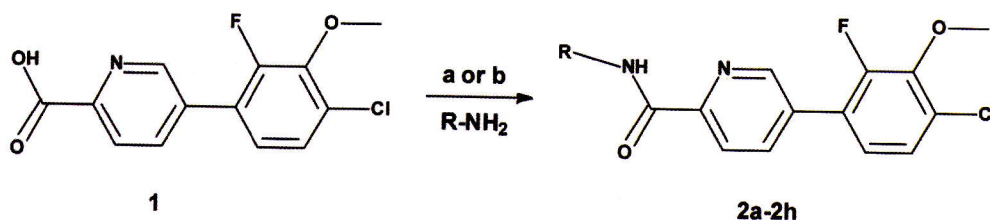


Koteswara Rao Anam & Ganesamoorthy Thirunarayanan*

Department of Chemistry, Annamalai University, Annamalainagar-608 002, India

- 99 **Microwave-assisted solution phase synthesis of novel pyridine carboxamides in neat water and ADMET and protein-compounds interaction analysis and antibacterial activity**

Novel pyridine carboxamide derivatives (2a-2h): All the 8 compounds have higher antibacterial activity.

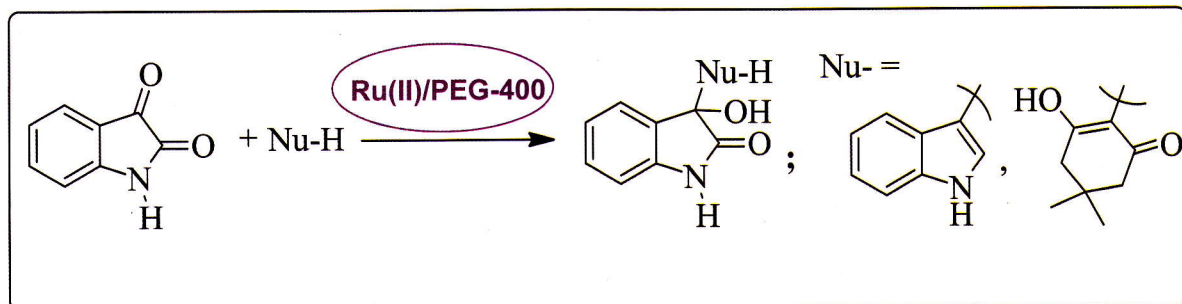


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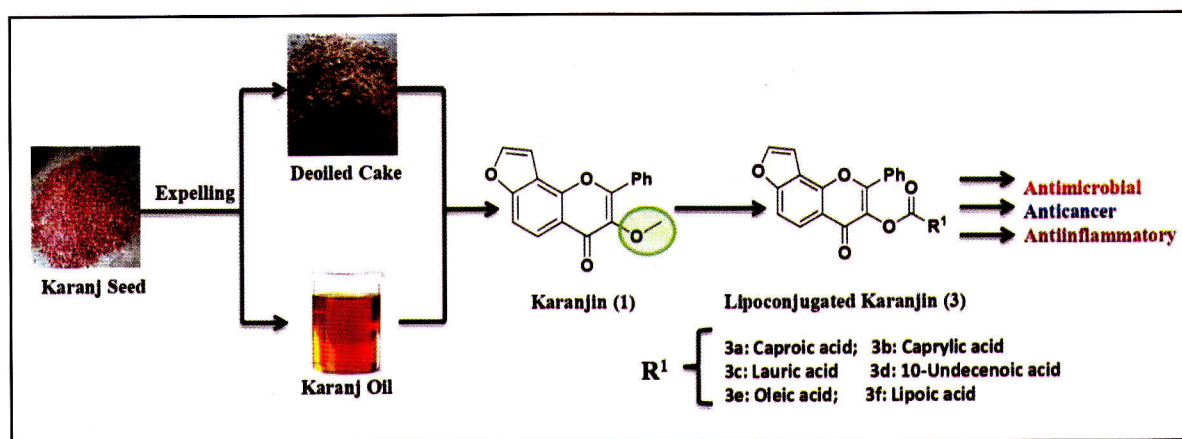
- 107 **Ru(II)/PEG-400: A green synthesis of indolyl-oxindoles and indolyl-cyclohexane-dione hybrids as potential antimicrobial agents** A green and sustainable methodology has been successfully employed for the synthesis of 3-Indolyl-3-hydroxy oxindoles and 3-indolyl-3-hydroxy-5,5-dimethylcyclohexane-1,3-dione derivatives using Ru(II)/PEG-400 as a homogeneous recyclable catalytic system.



Shaila S Wagh, Arvind M Patil & Hanmant M Kasralikar*

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- 115 **Synthesis and bio-evaluation of novel acyl derivatives of karanjin** Different lipidic moieties such as 10-undecenoic, oleic, lipoic, caproic, caprylic and lauric acids have been acylated to demethylated karanjin to prepare six lipoconjugated karanjin. All the derivatives have been evaluated for antimicrobial, anticancer and antiinflammatory activities and compared with karanjin and its demethylated analog.

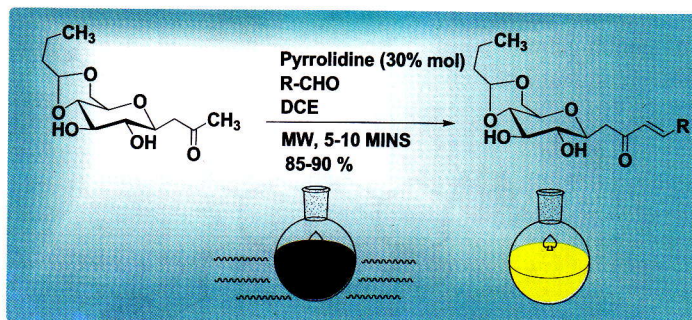


Anjaneyulu Eanti, Madhusudana Kuncha, Ade Arundha, Sunil Misra, Siddaiah Vidavalur, Sistla Ramakrishna & Sanjit Kanjilal*

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121 Microwave assisted reaction, photophysical studies and antibacterial activities of simple sugar chalcone derivatives

Aldol condensation is adopted for the synthesis of sugar chalcone derivatives from β -C-glycosidic ketones with various aromatic aldehydes under basic condition with both conventional as well as microwave conditions. Microwave assisted reaction gives an excellent yield. Sugar chalcone derivatives exhibit excellent antibacterial activity.

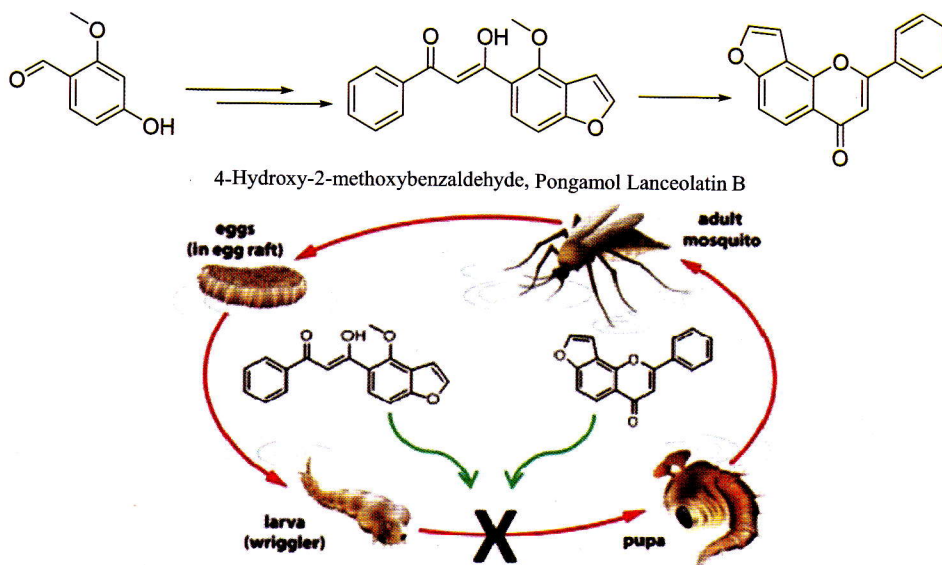


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Department of Chemistry, Government College of Engineering Srirangam, Thiruchirappalli 620 012, India

126 Synthesis and evaluation of mosquito larvicidal activity of pongamol and lanceolatin B

First synthesis of pongamol and lanceolatin B starting from 4-hydroxy-2-methoxybenzaldehyde is reported. Synthesized compounds are evaluated for mosquito larvicidal activity against early 4th instar larvae of *Culex quinquefasciatus* strain and both exhibited very good mosquito larvicidal activity.

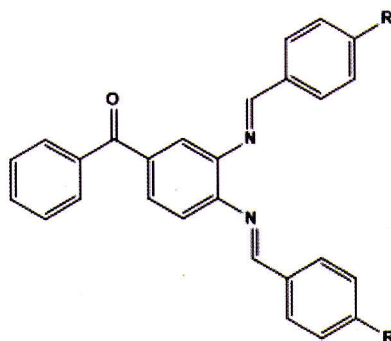


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- 131 **Synthesis, spectral, antibacterial and docking analyses of (3,4-bis((*E*)-(arylidene)amino)phenyl)-(phenyl)methanones**

Some biologically active Schiff bases namely (3,4-bis((*E*)-(arylidene)amino)phenyl)(phenyl)methanones have been synthesized through ultrasonication spectroscopically characterized. The antibacterial and molecular docking studies of these imines are evaluated.



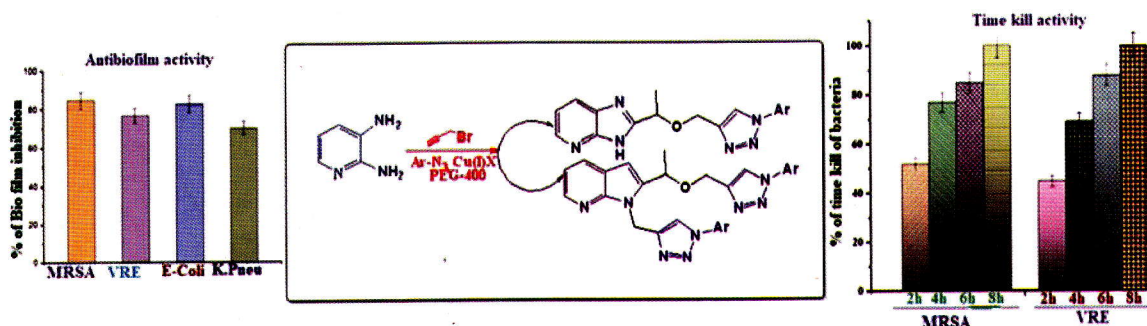
R= H, F, Cl, Br, CH₃, OCH₃

I Muthuvel, S Manikanadan, G Thirunarayanan*, V Usha & V Sathiyendiran

Department of Chemistry, Annamalai University, Annamalainagar 608 002, India

- 139 **Synthesis of new imidazopyridine based 1,2,3-triazoles: Evaluation of antibacterial, antibiofilm and time kill studies**

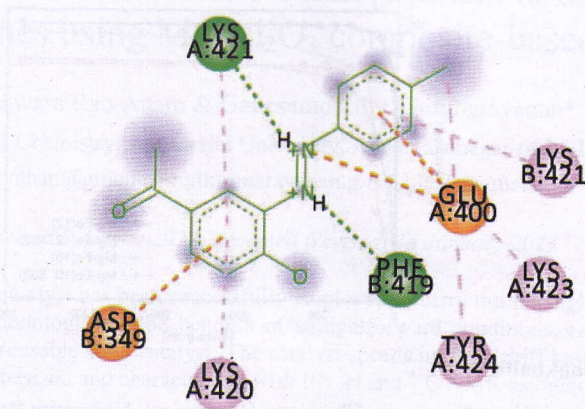
Synthesis of 1,2,3-triazoles using click chemistry and their characterisation is reported. The title compounds have been screened for their antibacterial, antibiofilm and time kill studies.



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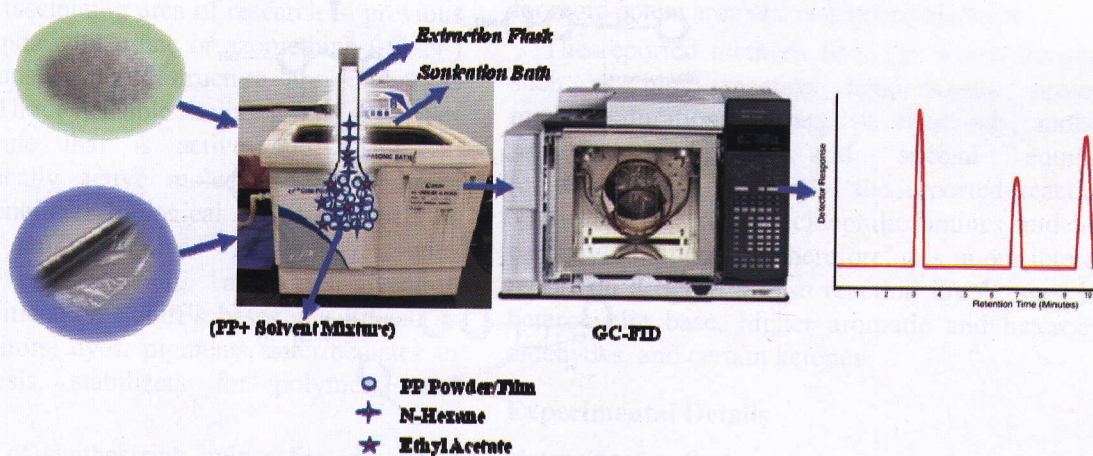
- 147 **In silico study of CYP450 inhibitor activity of (*E*)-1-(3-((4-chlorophenyl)diazanyl)-4-hydroxyphenyl)-ethanone** Compound shows significant bonding interactions with CYP3A4, CYP2D6 & CYP2C9. It shows docking score higher than that with standard drug Gemcitabine with all six CYP450 enzymes considered for the study.



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- 153 **Extraction and estimation of antistatic agent glycerol monostearate in polypropylene by gas chromatography coupled with flame ionisation detector** Solvent extraction and GC analysis was performed for GMS-90 additive used in polypropylene.

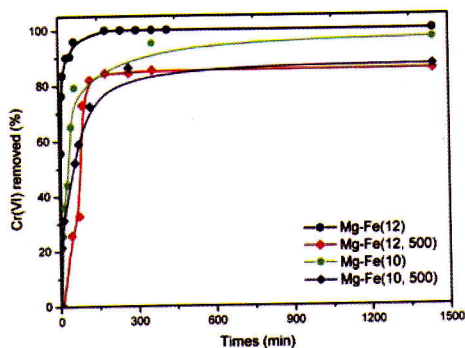


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158 Cr(VI) removal from water by synthesized Mg-Fe layered double hydroxides – Effect of calcination

Lamellar structure of Mg-Fe layered double hydroxides before calcination and the formation of spinel ($Mg-Fe_2O_4$) and magnesium oxide after calcination at $500^\circ C$ was confirmed by XRD analysis. The lower removal equilibrium time (3 h) is obtained in the case of the uncalcined LDH prepared at pH 12.

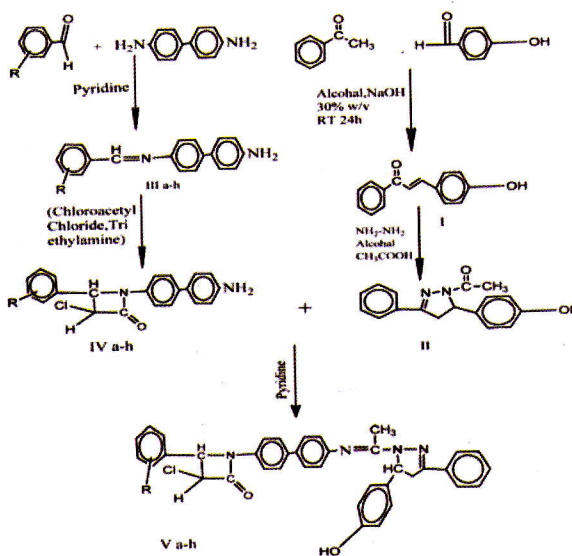


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163 Design, synthesis and characterization of novel substituted pyrazol-azetidin-2-one derivatives for their antimicrobial activity

Synthesis of novel 3-chloro-4-(2-substituted phenyl)-1-(4'-((1-(5-(4-substituted phenyl)-3-phenyl-4,5-dihydro-1H-pyrazol-1-yl)ethylidene)amino)-[1,1'-biphenyl]-4-yl)azetidin-2-one, consisting of a pyrazol motif (prepared from chalcone) and a lactam ring (synthesized from Schiff base of aromatic aldehyde) is reported. The compound is also tested for its antimicrobial activities.



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