A novel process for synthesis of Atovaquone

A stereospecific efficient process for synthesis of atovaquone \textit{i.e.} trans-2-[4-(4-chlorophenyl)cyclo-hexyl]-3-hydroxy-1,4-naphthalenedione 1 and its \textit{cis} isomer 2 from commercially available raw materials such as \textit{α}-tetralone and 4-(4-chloro-phenyl)cyclohexanone is described.

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Development and validation of LC-MS/MS method to determine the residue of veterinary drugs ivermectin, doramectin and moxidectin in milk

A comparatively simple, sensitive and rapid analytical method has been developed and validated to determine the residues of avermectins, such as ivermectin, doramectin and moxidectin in milk using LC-MS/MS in positive ionization mode.

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1318 2-(Quinolin-4-ylthio)-1,3,4-oxadiazole derivatives: Design, synthesis, antibacterial and antifungal studies

A series of novel hybrid 2-(7-chloroquinolin-4-ylthio)-5-(substituted)-1,3,4-oxadiazole derivatives have been designed, synthesized which contain different pharmacophores like quinoline and 1,3,4-oxadiazole linked via sulfur atom. The derivatives are characterized by elemental analysis and spectral studies and have also been screened for their antibacterial and antifungal activity.

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1325 Molecular descriptors in modeling of TNF-α converting enzyme (TACE) inhibition activity of 2-(2-aminothiazol-4-yl)pyrrolidine-based tartrate diamides

A QSAR study has been carried out on a new series of tartrate-based compounds to explain their TNF-α converting enzyme (TACE) inhibition activity in terms of chemometric descriptors. These descriptors have highlighted the role of polarizability/ van der Waals type of interaction for (±)-congeners of the series. On the other hand, the atomic masses and atomic Sanderson electronegativities weighted descriptors have played significant role in addressing TACE inhibition activities of remaining compounds of the series. Based on the findings, a few potential compounds of tartrate scaffold have been suggested for further exploration.

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Ionic liquid mediated synthesis of some novel fluoro isoxazolidine and isoxazoline derivatives using \( N \)-benzyl fluoro nitrone via cycloaddition reaction and their antimicrobial activities

1-Butyl-3-methylimidazolium based ionic liquids are found to accelerate significantly the intermolecular 1,3-dipolar cycloaddition of \( N \)-benzyl-fluoro nitrone derived in situ from 2,6-difluoro benzaldehyde and \( N \)-benzylhydroxylamine, with activated alkenes and electron deficient alkynes to afford enhanced rates and improved yields of isoxazolidine and isoxazolines. All the novel isoxazolidine and isoxazoline derivatives have been screened for antimicrobial activities and found to be very active.

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Synthesis of some novel 3,5-diarylpyrazole derivatives of dibenzo-18-crown-6-ether

A method has been devised for synthesis of novel pyrazole derivatives of dibenzo-18-crown-6-ether. Less reaction time, use of mild reaction conditions and good yields are the advantages of the present protocol.

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Notes

Studies of 4-furanone and 4-oxazolone substituted coumarins: Synthesis, physiological and biological activity

2-Aryldiene-4-(substituted aryl)but-3-ene-4-olides also known as 3-(coumarin-4-yl)-5-(substituted benzoyl)-2-(3H)-furanones have been prepared from 3-(substituted benzoyl propionic acid and coumarin-4-aldehyde and characterized on the basis of IR, $^1$H NMR and mass spectrometric data. Some of the compounds have been tested for their antimicrobial activity.

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Mild and efficient synthesis of 2,8-di(3-aryl-[1,8]naphthyridin-2-yl)-1,2,3,4,6,7,8,9-octahydropyridazino[4,5-g]phthalazine-1,4,6,9-tetraones using non-traditional conditions and evaluation of their antibacterial activity

An efficient, practical and eco-friendly method for the synthesis of 2,8-di(3-aryl-[1,8]naphthyridin-2-yl)-1,2,3,4,6,7,8,9-octahydro pyridazino [4,5-g]phthalazine-1,4,6,9-tetraones 3 is described. The compounds 3 have been evaluated for their antibacterial activity.

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