

HEB

SYNTHESIS AND CHARACTERISATION OF NOVEL SCHIFF BASE CONTAINING THIAZINE DERIVATIVES AS POTENTIAL ANTIMICROBIAL AGENTS

JOHP

Afroz Mehdi


M. Pharmacy (Pharmacology), Nizam Institute of Pharmacy, Deshmukhi (V), Pochampally (M), Behind Mount Opera, Yadadri Bhuvanagiri (Dist)-508284, Telangana, India.

E-mail - afrozmehti22@gmail.com

ABSTRACT

Chalcone is a unique template that is associated with several biological activities. Chalcones are natural biocides and are well known intermediates for synthesizing various heterocyclic compounds²³. Chalcones are secondary metabolites of terrestrial plants, precursors for the biosynthesis of flavonoids. Introduction of halogen into the benzenoid part of α,β -unsaturated ketones enhances the biological activity²⁴. The compounds with chalcone as backbone have been reported to possess varied biological and pharmacological activities²⁵, including antimicrobial, anti-inflammatory, analgesic, cytotoxic, antitumor, antimalarial, antitubercular, antiviral, anti-HIV, antiulcerative, antileishmanial, antioxidant, antiprotozoal, immunomodulatory, anticonvulsant, antifedent, antibiotic, antihyperglycemic, antihyperlipidemic, antihistaminic and antiplatelet activities. Chalcones continue to attract considerable scientific attention because of their association with a variety of biological activities. Given below is a brief account of various modifications reported on chalcones, which resulted in a variety of biological and pharmacological activities. The antimicrobial activity of chalcones is being increasingly documented. The objective of the present work is to synthesize Schiff base derivatives of thiazine from chalcones and to study their antibacterial activity in particular. Thus an attempt has been made in this direction. Many research groups either isolated or identified the structure of chalcones that possess antimicrobial activity or synthesized or modified natural chalcones. The presence of a reactive α,β -unsaturated keto function in chalcones to undergo a conjugated addition to a nucleophilic group like a thiol group in an essential protein is found to be responsible for their antimicrobial activity, which may be altered depending on the type and position of the substituents on the aromatic rings.

KEYWORDS: Chalcones, Synthesis, Characterisation, Novel Schiff Base, Thiazine Derivatives, Potential Antimicrobial Agents

Access this Article Online	Quick Response Code: 
Website: http://www.journalofhospitalpharmacy.in	
Received on 15/04/2018	
Accepted on 19/04/2018 © PEN All rights reserved	