Available online at www.joac.info

ISSN: 2278-1862

Journal of Applicable Chemistry

2013, 2 (5):1102-1115

(International Peer Reviewed Journal)

Design, Synthesis and Study of Fused 1,4 dihydroPyrimidines of Biological Interest-A Review

Ramandeep Kaur[1] and Balbir Kaur[2*]

1. Department of Chemistry, S.U.S. Government College, Sunam-148028, Sangrur, **INDIA**
2. Department of Chemistry, Punjabi University, Patiala-147002(Pb), **INDIA**

Email: kaur2007_chem@yahoo.co.in[1], drbalbirkaur@gmail.com[2*]

Received on 19th August and finalized on 23rd August 2013

ABSTRACT

The challenge in chemistry is to develop practical processes, reaction media, conditions and utility of materials, based on the idea of green chemistry.Thus in order to meet the scientific challenges, of protecting the human health and environment and also simultaneously achieving commercial viability, some bio-active compounds are synthesized through MORE (Microwave-assisted organic reaction enhancement) technique as it is easy, effective, economical and eco-friendly. The present review includes pyrimidines, quinazolines and their fused derivatives, which have great significance in life as these structural subunits exist in many natural products. As dihydropyrimidines are potent mimics of dihydropyridines, so they can act as calcium channel blockers as the latter. Besides this, the compounds containing pyrimidine nucleus, have shown antimicrobial activities too. Some other derivatives like, pyrimidine and quinazoline thiols come out to be anti-convulsive in nature. In spite of the pharmacological action, the latter derivatives acted as vulcanization accelerators also. Thus, the present review is a kaleidoscope of various properties of different, bioactive compounds.

Keywords: Green chemistry, MORE technique, Calcium channel blockers, Antimicrobial activities, Anticonvulsant.
