



Synthesis of new derivatives of 2-Substituted 1,5-Benzodiazepine and Evaluation of their Anti-microbial activities

Pratima Sharma^{*1}, Navneet Kumar², Navjeet Kaur¹ and Dharma Kishore¹

1. Department of Chemistry, Banasthali University, Rajasthan, **INDIA**

2. Department of Chemistry, Raj Kumar Goal Institute of technology, Ghaziabad, **INDIA**

Email: misspratima29@gmail.com

Received on 26th April and finalized on 2nd May 2013.

ABSTRACT

In order for our synthetic plan to succeed to give the above 2-substituted 1, 5 benzodiazepine derivatives, we required a good synthesis of 2-thiomethyl ether substituted analogue of face 'c' cyclohexano annulated 1, 5- benzodiazepine. An innovative protocol to the synthesis of this material emerged on exploring the potential of the ketene dithioacetal derivative of cyclohexanone, on its reaction with o-phenylenediamine. Nucleophilic development of 2-iminothiomethylether function with the vital fragments of etravirine such as p-aminobenzonitrile, 2, 6-dichloro-4-amino pyrimidine, 6-(p-cyanophenylamino)-2-chloro-4-amino pyrimidine, p-acetyl, dimethylamino metyleneketone, pyrazole and isoxazole derivatives etc afforded the corresponding 2-substituted 1, 5-benzodiazepine analogues, in acceptable yields. The purity of the compounds was checked by TLC and their structures were established on the basis of their spectral data.

Keywords: 1,5-benzodiazepine, o-phenylenediamine(OPD), Antibacterial, Antifungal activities.
