



Synthesis, Characterization and Antifungal Evaluation of Novel Bis 1,3,4 Thiadiazole from 4,4'-Diamino-Bibenzyl

Rita Gulab Ramsinghani^{1*} and Zoeb A. Filmwala²

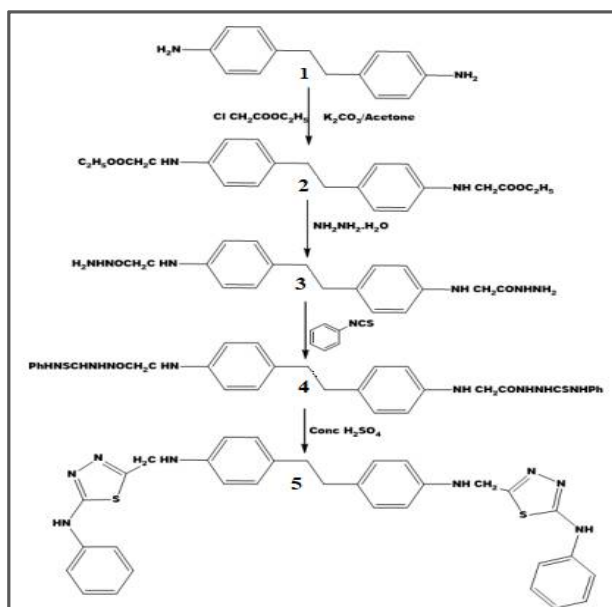
1. Department of Chemistry, VES College of Arts, Science and Commerce, Chembur, Mumbai, **INDIA**
 2. A.E. Kalsekar College, Near Bharat Gear Factory, Mumbra District Thane, Mumbai, **INDIA**
- Email: rita.ramsinghani@ves.ac.in

Accepted on 13th November, 2018

ABSTRACT

4,4'-diamino-bibenzyl(1) in acetone and in the presence of K_2CO_3 is refluxed on a steam bath with mono chloro ethyl acetate to form a diester (2), this diester on refluxing with hydrazine hydrate forms a dihydrazide(3), this on refluxing with phenyl isothiocyanate forms bis(N-phenylhydrazine-carbothioamide)(4), the bis carbothioamide on warming with conc. H_2SO_4 forms the bis thiadiazole (5). The newly synthesized compounds were characterized by IR, 1H NMR, spectral data, elemental analysis and evaluated for their *in vitro* antifungal activity against *Penicillium citrinum* and *Fusarium oxysporum*.

Graphical Abstract



Synthesis of compounds

Keywords: 4,4'-diamino-bibenzyl, Synthesis, Bisthiadiazoles, Antifungal.