ABSTRACT

The heterocyclic compounds have shown a wide range of pharmacological and biological activities. The novel series of heterocyclic compounds was prepared containing the 1,3,4-oxadiazole nucleus. Different hybrids of 1,3,4-oxadiazole were prepared because that hetero molecule have broad spectrum of pharmacological activities such as anti-tumor, anti-bacterial, anti-convulsant, anyi-HIV, anti-fungal etc. The 1,3,4-oxadiazole hybrids were prepared through four different steps. In step 1 benzene sulfonylchloride **A** was reacted with ethylnipecotate **B** and formed a carboxylate **C** the pH sohuld be maintained at 9-10. In step 2 the compound **C** reacted with hydrazine and reflux for 2-3 hours and synthesized a hydrazide **D**. In step 3 compound **D** was combined with CS_2 in the presence of KOH and produced oxadiazole molecule **E**. Finally, in step 4 different hybrids of compound 1,3,4-oxadiazole were prepared by reacting compound **E** with different electrophiles by using LiH and DMF as solvent. The structure elucidation of prepared compounds was done by ^{1}H-NMR different peaks of spectra justify various protons of synthesized compounds and functional groups were determined by IR. All prepared hybrids of 1,3,4-oxadiazole were evaluated aginst anti-urease activity, α-glucosidase activity and all derivatives showed good potential against these activities.