**ABSTRACT**

Convenient and efficient synthesise of 5, 7-dimethyl-1, 4-tri hydro-2H- Pyridazino [3,4-b] quinolin-3-one 4(a).The precursor 2-chloro 4, 6-dimethyl quinoline2(a) was obtained by the reaction of 2-hydroxy 4, 6-dimethyl- quinoline with phosphrous oxy chloride.The 2-chloro 4,6-dimethyl quinoline refluxed with hydrazine dihydrochloride in 20 mL of ethanol to give 2-hydrazino 4,6-dimethyl quinoline3(a). The antibacterial,antifungal and antioxidant activity of the synthesized compound were also studied and their results were found to be active.