ABSTRACT

The thesis entitled “Synthesis, characterization and biological evaluation of novel hydrazone derivatives” is divided into seven chapters. An overview of N-acylhydrazone derivatives, analytical and biological importance and their synthetic approaches are described in Chapter-1. A broad survey of literature about N-acyl hydrazones, especially describing the synthetic approaches, biological activity, reactivity and transformation into various heterocyclic scaffolds is covered in Chapter-2. Chapter-3 deals with the aims and objectives of the work on the synthesis, characterization and their evaluation as potential antibacterial agents. Chapter-4 depicted the synthesis of novel hydrazone derivatives of 2, 5-difluorobenzoic acid as potential antibacterial agents. Chapter-5 gives the details of synthesis, characterization and antimicrobial activity of hydrazone derivatives obtained by the condensation of 3-chloro-4-hydroxy benzoic acid. Chapter-6 illustrates the synthesis, characterization and antibacterial screening of hydrazone derivatives bearing 3-chloro-4-hydroxy-phenyl ring. A detailed experimental and analytical elucidation followed by their synthesis and characterization of those hydrazone derivatives are discussed in these chapters. Finally the thesis concludes with summary and conclusion in Chapter-7.