PREFACE

Drug research is an extremely complicated endeavour. It encompasses several disciplines united by common goal, namely the development of a novel therapeutic agent. Ideally the process of rational drug design should provide a delicate balance between the Chemistry, Pharmacology and Pharmacokinetics of the drug. Work embodied in my thesis is presentation of interdisciplinary studies and is divided in 5 chapters in which initial three chapters (chapter I, ii, iii) are concerned with studies in design and synthesis of antipeptic ulcer agents while the other chapters (chapters iv & v) are related to synthesis of Selective Estrogen Receptor Modulators.

In chapter (i) an attempt is made to revisit on various aspects of Peptic Ulcer disease including various ways of treatment, with special focus on proton pump inhibitors.

While chapter (ii) is concerned with synthesis of various compounds related to cis-5-styryl-2-oxo-oxazolidine-4-carboxylic acid (CDRI 85/92), a potent Anti-ulcer agent running advanced stage of development.

Drug metabolism and pharmacokinetics studies of one of its prodrug have been comprehensively described in rats, in chapter (iii).

Chapter (iv) focuses on the aspect that ligand mediated structural perturbations in and around the ligand binding pocket of estrogen receptor, contributed by the side chain effects lead to the receptor antagonism. And adjusting the balance of these effects may lead to the novel strategy for designing improved selective estrogen receptor modulation. In light of this the chapter will provide an overview of SERMs and their structural diversity.

In chapter (v), various synthetic methodologies have been discussed in which side chain of SERMs have been modified by introduction of amidines and guanidines.