
PREFACE

Illness is a cause of mental trauma for the families of patients. Before the discovery of antibiotics any minor infection in the body could become deadly. But after the advancement in the field of antibiotics many disease became treatable. In the present scenario there has been an increase in the number of resistant microorganisms. These drug resistant microorganisms are a cause of great concern for the scientists and medical practitioners. But, for most of the people, this area still remains obscure up to a great extent. Thus, the practices which enhance the development of such microorganisms are still present among the common masses. The microorganisms develop various mechanisms to become resistant against various antibiotics, thus making them ineffective. These microorganisms pose a threat to the healthy survival of human beings, thus, there is a need for alternate drugs. Currently antimicrobial peptides are being studied to be developed as alternate drugs.

In this research work some applications of antibiotics using *In silico* methods were studied. The chapter-1 of the thesis, i.e., introduction, deals with the current scenario of rising cases of antibiotic resistance and the urgent need for alternate drugs. This chapter also used to introduce the various toxins and proteins against which the *in silico* interactions of the antimicrobial peptides has been studied in this thesis. The chapter-2, literature review and objective, states the various works by various scientists on antimicrobial peptides since several years. It also discusses the objectives of the work. The chapter-3, materials and method, discusses the various tools, softwares, etc. used for various studies and also describes the various methods used for the studies. The chapter-4, results and discussion, describes the results of the studies. The interpretations and analysis of the studies is described in this chapter. The last chapter-5 concludes the interpretation and analysis of the studies of the thesis.