PREFACE

The research work 'A Comparative study of α-hemolysin and jacalin that influence mammalian cell signaling' illustrates, a common objective to decipher the mode of action of bacterial pore forming toxin secreted by *Staphylococcus aureus* and carbohydrate binding protein of *Artocarpus integrifolia*, in a rational manner. The scope of this thesis is the structural and functional investigations of α-hemolysin's assembly and mechanism at molecular level on eukaryotic cells. Jacalin extended the aim of the primary study on α-HL action to reveal the events that occur on mammalian cells in general. This thesis provides information and strives to give a better understanding of eukaryotic micro-domains specific action of soluble proteins through membrane penetration to modulate the mammalian cell signaling. Hence, the information can be exploited for new generation drug design. Necessary background of literature is provided on soluble protein’s target cell binding to their relevant cell surface receptors and signaling modulation.