Preface

Hyperlipidemia is a major etiological factor during the progression of various systemic disorders like cardiovascular diseases, atherosclerosis, etc. The conventional treatment for hyperlipidemia is accompanied with side effects, and so the need for alternative medicine with desirable therapeutic efficacy is essential. Lately, there have been lots of reports suggesting the therapeutic role of various indigenous plants in Indian subcontinent with remarkable results. Cassia auriculata is a widely used plant in traditional medicine to treat numerous health ailments with anti-oxidant properties, and in the current study, we chose this plant as a source to test its efficacy as an anti-hyperlipidemic drug. In this thesis, we discussed the anti-hyperlipidemic activity of the ethanolic extract of Cassia auriculata flower (Et-CAF) in hyper-lipidemia induced Saccharomyces cerevisiae and rat models and the results obtained categorically established the role of Et-CAF in treating hyperlipidemia.

This thesis comprises of five chapters, chapter I contains general introduction and literature review for yeast model system. Chapter II explains the anti-hyperlipidemic activity; of Et-CAF extract in oleic acid induced hyperlipidemic Saccharomyces cerevisiae model system. Chapter III delineates the topic of cholesterol synthesis and regulation. Chapter IV discusses how Et-CAF extract exerts its role in hyperlipidemia induced male Wistar rats and Chapter V deals with the Identification and isolation of active constituents present in the Et-CAF and their potential to treat hyperlipidemia in Wistar male rats. Finally, the findings are discussed briefly in the summary chapter. Thus, this thesis has identified and substantiated the role of Et-CAF in attenuating hyperlipidemia in Saccharomyces cerevisiae and rat model system with compelling evidence.