# Preface

*The aim of this work is to formulate and evaluate bioadhesive microspheres for nasal drug administration of Tizanidine HCl, to prolong the therapeutic effect of the drug as the drug has short half life (2.5 hrs) and poor oral bioavailability (40%).*

*Tizanidine is an anti-asthamatic and anti-inflammatory drug. I have prepared bioadhesive microspheres of Tizanidine hydrochloride by emulsification phase separation technique by using chitosan polymer due to its biodegradable and mucoadhesive properties.*

*The aim of my research work is to develop the new route or systemically active drug such as proteins, peptides, hormones and other drugs which are poorly absorbed orally and extensively metabolized in liver. There are so many routes for systemic delivery of drug like gastrointestinal route, parenteral route, buccal route, transdermal route, rectal route etc. but some problems are associated with these routes hence the bioavailability of the drug is affected.*

*To overcome these problems, alternative route of drug administration has been investigated, called nasal route. Now nasal route of drug administration is becoming increasingly important for systemic delivery of active drugs. The advantages of nasal route are no drug degradation in git, absence of hepatic first pass metabolism, rapid drug absorption, quick onset of action, more bioavailability etc. I have prepared bioadhesive microspheres because it increases the contact time of drug with nasal mucosa which intern increases the absorption and bioavailability of drug. Frequency of dose administration can also be reduced by bioadhesive microspheres.*