PREFACE

There are number of compounds with good pharmacological activity showing high lipophilicity and slight water solubility as the fundamental physicochemical characteristics. Hence the clinical significance of these drugs (Lipophilic in nature) is sometimes not realized. O/W nanoemulsion is the formulation which is expected to increase the solubility by dissolving poorly water soluble compounds into oil phase and to enhance oral bioavailability, and it is also possible for this formulation to raise lymph directivity and to avoid hepatic first pass metabolism depending on the kind of oil. Oral bioavailability of a drug depends on its solubility and/or dissolution rate, and dissolution may be the rate determining step for the onset of therapeutic activity. Therefore efforts to increase drug dissolution of drug are often needed.

In this perspective, a study on “Formulation, Development and Optimization of Lipophilic Drug Using Nanoemulsion”, have been taken up and incorporated in the thesis.

Thus in this research work a novel o/w nanoemulsion formulation is tried which enhances the oral bioavailability of the poorly water soluble drug terbinafine HCl. The objectives of the present work include development and characterization of o/w nanoemulsion containing terbinafine HCl, improve oral bioavailability by lymphatic transport and reduce hepatic first-pass metabolism, to reduce the dose required to produce same pharmacological effect.
where by dose related side effects can be reduced and to compare its release profile with other dosage forms. The plan of work consists of compatibility test, selection of the formulation, evaluation of the formulation, bioanalytical analysis which are incorporated in seven chapters. At the end of each chapter literature citations are given.