6. CONCLUSION

LSDDS

The liquisolid tablet of Orlistat was successfully formulated and evaluated by implementing $3^2$ full factorial design. From evaluation LS-3 batch showed acceptable flow characteristic, acceptable hardness, disintegration time and maximum drug release $99.8 \pm 1.55\%$ within 60 min. New carrier Neusilin US2 found to be having higher liquid loading efficiency than Avicel PH102 but lacks wetting and binding ability. On in vitro pancreatic lipase inhibition study it was observed that the developed liquisolid formulations showed highest rate and extent of inhibition than the marketed formulation which supports increased drug release and dissolution of poorly soluble Orlistat.

SEDDS

Self-emulsifying Orlistat tablet was successfully formulated via the self-emulsifiable liquid system by implementing $3^2$ full factorial design. The globule size of SO-5 batch was found to be $96.4 \pm 8.5$ nm with minimum and emulsification time i.e and $26 \pm 4$ sec. Self-emulsifying tablet showed $99.53 \pm 0.42$ % drug release after 60 min time point whereas marketed formulation showed only $93 \pm 4.8$ %. Hence, it can be concluded that self-emulsifying drug delivery technique could serve as a reliable solubility enhancement strategy to poorly water soluble drugs. Both techniques were found to be effective for solubility enhancement purpose as formulation showed the effective lipase inhibition potential.
LIMITATIONS AND FURTHER SCOPE FOR THE STUDY

The use of different quality by design (QbD) approaches for preliminary screening like Plackett and Burman design could be utilized to select independent variables along with their precise levels which are having more impact on desired outcomes (Globule size, PDI, Emulsification time, Angle of repose, Liquid load factor, Weight of tablet.

In a present study, the optimized formulations showed increase in dissolution rate followed by improved lipase inhibition. The study needs to be continued to develop the extended release application with dissolution enhancement approach.

The tablet produced by liquisolid technique had more weight hence, there is need to develop tablet with minimum weight this can be achieved by using carriers, which are having maximum liquid load potential.

Though, both formulations were found to be stable for three months but hardness of tablet decreased because of improper packaging. Hence, there is need to develop effective packaging system for the formulation.