CHAPTER - 6
RECOMMENDATIONS AND FUTURE DIRECTIONS

At present, there are lot of formulations in the market for pulmonary drug delivery system but sustained release medication for pulmonary route is not available in the market. Even, the research is being carried out from many years before on the sustained release of drug from different formulations for pulmonary drug delivery system. As the research on sustained release for pulmonary drug delivery offers advantages such as local deposition of the drug in the lungs, reduction of dose of drug to be used in formulation, reduced frequency of dosing, prolonging of residence time of the drug in the lung, slowing of the rapid absorption rate of drug, reduces systemic exposure of the drug, reduces the incidences of side effects associated with the systemic exposure of the drug. So, there is urgent need to carry out research in the field of sustained release of pulmonary drug delivery systems as it will offer lot of advantages for current market formulations and will solve various problems associated with formulation of medication for pulmonary drug delivery system.

The extensive research goes on various drug delivery systems for pulmonary route are liposomes, microspheres, nanomedicines and dry powder inhalers(DPI) of controlled release products. Now a days, nanomedicine research is going on in various fields but the nanomedicine research in the field of pulmonary drug delivery is very less. So, the important steps must be taken to enhance the research in the field of nanomedicine for pulmonary drug delivery as the nanomedicine are safe, effective and offer exclusive advantages. The sustained release aerosols offer unique opportunities and challenges in the development of pulmonary drug delivery systems and recommended to be an active area of research. Thus, it is directed that the further research on localized sustained release aerosols is most significant for pulmonary drug delivery system especially for the treatment of the life threatening respiratory disorders.