Objective of the present work:-

- National cancer institute programs have supported research on novel nanodevices capable of one or more clinically important functions, including detecting cancer at its earliest stages, pinpointing its location within the body, delivering anticancer drugs specifically to malignant cells, and determine if these drugs are killing malignant cells.
- As these nanodevices are evaluated in clinical trials, researchers envision that nanotechnology will serve as multifunctional tool that will not only be used with any number of diagnostic and therapeutic agents, but will change the very foundations of cancer diagnosis, treatment and prevention.
- In order to increase the therapeutic efficacy, to improve therapeutic index of drug and reduce the side effects of administration of Capcitabine in the form of tablet, in the present work an attempt is being made to provide an alternative vesicular drug delivery approach in the form of nanoparticles for Capcitabine which will have the following advantages:
  A) Reduce dosing frequency
  B) Provides selective passive targeting to lymphocytes and macrophages
  C) Enhanced patient compliance and convenience
  D) Increased efficiency and therapeutic index
  E) Improved central nervous system penetration and inhibition of CNS efflux.