LIST OF FIGURES

Figure No.	Title	Page No.
1.1	Kaplan-Meier Survival Curve	4
2.1	A schematic representation of incorporation and encapsulation of drugs into a liposome	11
2.2	A schematic representation of a phospholipid	12
2.3	The enhanced permeability and retention effect	14
2.4	Diagrammatic representation of the folate receptor mediated endocytosis pathway.	19
2.5	Challenges for site-specific liposomal drug delivery systems.	20
2.6	Principal modes of uptake and interaction between liposomes and cells.	21
3.1	Standard plot of Gemcitabine in methanol and water at 268nm	40
3.2	Std plot of Gemcitabine in water at 268nm	40
4.1	Schematic representation of the gemcitabine encapsulation process	44
4.2	Synthesis of F-PEG-DSPE	46
4.3	Particle Size analysis of the optimized batch of the Conventional liposomes (representative sample)	54
4.4	Particle Size analysis of the optimized batch of the Stealth liposomes (representative sample)	55
4.5	Particle Size analysis of the optimized batch of the Folate targeted liposomes (representative sample)	55
4.6	Zeta potential analysis data of the Conventional liposomes (representative sample)	56
4.7	Zeta potential analysis data of the Stealth liposomes (representative sample)	56
4.8	Zeta potential analysis data of the Folate targeted liposomes (representative sample)	57
4.9	Photography of MLVs in Olympus microscopy	58
4.10	Photography of SUVs by TEM	59
4.11	FTIR spectra of folic acid	60
4.12	FTIR spectra of DSPE-PEG-Folate	61
4.13	FTIR spectra of GEM Pure drug	61
4.14	FTIR spectra of HSPC	62
4.15	FTIR spectra of CL liposomal formulation	62
4.16	FTIR spectra of Cholesterol	63
4.17	DSC of HSPC	64
4.18	DSC of Cholesterol	64
4.19	DSC of Pure drug	65
4.20	DSC of CL Liposomal formulation	65

4.21	*In vitro* release studies at pH 7.4 buffer.	67
6.1	Cell Cycle with check points	76
6.2.	Cell cycle histograms of HeLa cells after treatment with GEM/ liposomal suspension for 4 hrs	82
6.3	Cell cycle histograms of A549 cells after treatment with GEM/ liposomal suspension for 4 hrs.	82
6.4.	Cell cycle histograms of A549 cells after treatment with GEM/ liposomal suspension for 8 hrs.	83
6.5	Flow cytometry of the cell entry dynamics of GEM/liposomal suspension in HeLa cervical cell line.	87
6.6	Flow cytometry of the cell entry dynamics of GEM/liposomal suspension in A549 cell line.	88
6.7	Confocal microscopy images of uptake of coumarin-loaded FT liposomes at different time intervals	91
6.8	Liposomal suspension activity on Caspase in A549 cell line, β Actin was used as standard	99
7.1	^{99m}Tc labeled PD and CL was injected via tail vein in Swiss mice. Percentage of injected dose associated with per gram of tissue or organ was calculated.	111
7.2	^{99m}Tc labeled SL and FT was injected via tail vein in Swiss mice. Percentage of injected dose associated with per gram of tissue or organ was calculated.	112
7.3	^{99m}Tc labeled CL and FT was injected via tail vein in tumor bearing Swiss mice. Percentage of injected dose associated with per gram of tissue or organ was calculated.	113
7.4	Blood concentration versus time plot following administration of 99^{m} Tc-GEM formulations	114
7.5	Tumor distribution of CL and FT in tumor bearing mice after intravenous injection	115
7.6	Ratio of tumor to muscle uptake of CL and FT in tumor induced mice after 1 and 24 hrs of post injection	115
7.7	Gamma scintigraphic images of a mice with ^{99m}Tc-labeled liposomes 1 hr post treatment (A) Conventional liposomes (B) Stealth liposomes (C) Folate targeted liposmes (D) Pure drug.	116