

LIST OF FIGURES

Fig. No.	Description	Page. No.
1.1	Metastasis pathway of cancer cells.	4
1.2	Conversion of a normal cell into a tumor cell	4
1.3	Schematic diagram of the extrinsic and intrinsic pathways of apoptosis	9
1.4	Receptor tyrosine kinase	11
1.5	Schematic representation of EGFR signalling pathway	15
1.6	Alkylating agents used for the treatment of cancer	18
1.7	Antimetabolite drugs used for the treatment of cancer	19
1.8	Platinum drugs used for the treatment of cancer	20
1.9	Topoisomerase I inhibitors used for the treatment of cancer	20
1.10	Topoisomerase II inhibitors used for the treatment of cancer	21
1.11	Plant Alkaloids used as chemotherapeutic agents	22
1.12	Signal transduction inhibitors	23
1.13	Tyrosine kinase inhibitors	24
1.14	Cell cycle regulators	25
1.15	Angiogenesis inhibitors	26
1.16	Illustration of docking and scoring	28
1.17	Commercial drugs containing quinone scaffold	32
1.18	Vitamin K series molecules	32
1.19	Mechanism of electron transfer of quinones	35
3.1	Schematic representation of plan of work	70
4.1	Scheme I for the synthesis of compound MB-1 to MB-19	72
4.2	Scheme II for the synthesis of compound MB-20 to MB-33	74

5.1	2D hydrogen bonding interaction of standard drug imatinib	109
5.2	Hydrogen bond interaction of MB-9 and MB-18 into the active site of 2GS6	110
5.3	Hydrogen bond interaction of compounds MB-24 and MB-32 into the active site of 2GS6.	112
5.4	<i>In vitro</i> cytotoxicity activity (IC ₅₀) of compounds against HeLa, MCF-7 and HepG2 cancer cell lines (of MB-1 - MB-19)	115
5.5	<i>In-vitro</i> cytotoxicity activity (IC ₅₀) of compounds against HeLa, MCF-7 and HepG2 cancer cell lines (of MB-20 - MB-33)	116
5.6	<i>In vitro</i> inhibitory activity (IC ₅₀) of compounds against EGFR kinase (of MB-1 - MB-19)	117
5.7	<i>In vitro</i> inhibitory activity (IC ₅₀) of compounds against EGFR kinase(of MB-20 - MB-33)	118
5.8	The change in the tumor volume after the treatment	121
