## **List of Figures**

Figure No.	Description	Page No.
Figure 1-1	Geographical distribution of TB	3
Figure 1-2	Drug discovery and development pipeline	9
Figure 2-1	Drugs used in the management of Tuberculosis	12
Figure 2-2	Neuroleptic phenothiazines in management of Tuberculosis	15
Figure 2-3	Phenothiazine derivatives possessing antitubercular potency	19
Figure 2-4	Structure-activity relationships of reported Phenothiazine derivatives	21
Figure 2-5	Marketed and late-stage developmental drugs containing carbazole scaffold	23
Figure 2-6	Carbazole alkaloids possessing antitubercular efficacy	28
Figure 2-7	Synthetic carbazole derivatives possessing antitubercular efficacy	32
Figure 2-8	Structure antitubercular activity relationship of reported carbazole derivatives	34
Figure 2-9	Role of NDH-2 and ATP synthase in ATP synthesis	36
Figure 2-10	Reaction catalyzed by type-II NADH dehydrogenase (NDH-2)	38
Figure 2-11	Quinine binding sites around FAD of NDH-2 from <i>C. thermarum</i> and <i>S. aureus</i>	38
Figure 2-12	Phenothiazine derivatives against type-2 NADH dehydrogenase	39
Figure 3-1	Design strategy for phenothiazine, carbazole and biphenyl derivatives	44
Figure 5-1	Docking pose of risperidone, chlorpromazine and designed molecules against D2 receptor (PDB code: 6CM4)	62
Figure 5-2	Docking pose of eticlopride, chlorpromazine and designed molecules against D3 receptor (PDB code: 3PBL)	63
Figure 5-3	Superimposition of <i>S. aureus</i> and <i>C. thermarum</i> NDH-2 over <i>Mtb</i> NDH-2	66
Figure 5-4	Docking of Bedaquiline and ZINC database hits against ATP synthase	67
Figure 5-5	Alignment of amino acid sequence of selected ATP synthase c-subunits	68

Figure 5-6	Docking poses of molecules 15p and 16p against NDH-2	71
Figure 5-7	Docking poses of molecules 13c and 15c against NDH-2	93
Figure 5-8	Docking poses of molecules 6b and 14b against NDH-2	113
Figure 5-9	Docking pose of molecules S9 and S10 showing interactions with the active site residues of mycobacterial ATP synthase (PDB code: 4V1F)	134
Figure 5-10	Dose response curve of compounds S9 and S10 against ATP synthesis inhibition	135
Figure 6-1	Graphical depiction of the present study	141