## LIST OF FIGURES

Part I : Potential NMDA Receptor Antagonist		Page No
Fig.	Progressive illustrations of brain degeneration caused by	05
1.1	Alzheimer's disease.	
Fig. 1.2	Therapeutic targets for Alzheimer's disease,	06
Fig.	Schematic illustration of apoptotic pathways triggered by excessive	14
1.3	NMDA receptor activity.	
Fig. 1.4	NMDA receptor model illustrating important binding and modulatory sites.	15
Fig. 3.1	Development of 3-benzazepins as NMDA receptor antagonists.	32
Fig. 3.2	SAR of benzazepines for NMDA receptor glycine site antagonistic activity	33
Fig. 3.3	Designed benzazepine-2-ones with substituents at 1 and 3 position	33
Fig. 4.1	<i>In vitro</i> neuroprotective potential of the test compounds (9 and 14) against $A\beta_{1-42}$ -induced toxicity.	67
Fig. 4.2	Morris water maze test	68
Fig. 4.3	in vitro ROS scavenging and antiapoptotic effects	69
Part II : Novel Cholinesterase Inhibitors		Page No
Fig. 1.1	Changes in Alzhiemer's brain	02
Fig.1.2	FDA approved anticholinesterase drugs for Alzhiemer's disease	03
Fig. 3.1	2,3-Substituted Quinazolinones as CNS acting agents	24
Fig. 3.2	Compounds with good anticholinesterase activity	25
Fig.	Test compound (75) enhanced spatial learning ability of	46
4.1	scopolamine-induced amnesic mice in MWM test.	
Fig.	Test compound ( <b>75</b> ) restored immediate working memory	47
4.2	impairment induced by ICV injection of A $\beta$ 1-42 in hippocampal	
Fig.	region of rat brains as observed in Y maze test. <i>In vitro</i> ROS scavenging and antiapoptotic effects of test compound	48
11g.	In virio ROD scavenging and annapoptone effects of test compound	+0

Fig. In vitro ROS scavenging and antiapoptotic effects of test compound 4.3 (75) against  $A\beta_{1-42}$ -induced toxicity of hippocampal neurons.