

Table of Contents

Contents	Page No.
Title Page	-
Certificates	-
Declaration	-
Acknowledgement	-
Dedication	-
Table of Contents	-
List of Tables	-
List of Figures	-
Chapter 1: Introduction	1-33
1.1. Tissue distribution of MAOs	1-2
1.2. Genes of MOs	2-3
1.3 Structure and binding site analysis of MOs	3-8
1.4. MAO Substrates and catalysis	8-11
1.5. Functions of MAOs	11-12
1.6. Estimation of MAOs	12-14
1.7. MAOIs	14-15
1.8. Classification of MAOIs	16-23
1.9. Therapeutic potential of MAOIs	23-28
1.10. Side effects/ADRs associated with MAOIs and challenges to newer agents	28-29
1.11. Pyrazoles and pyrazolines as MAOIs	29-33
Chapter 2: Literature Review	34-48
2.1. Review of literature	34-43
2.2. Research envisaged	44-45
2.3. Plan of work	46-48
Chapter 3: Synthesis and Characterization	49-132
3.1 Introduction	49-51

3.2 Materials and methods	52-54
3.2.1. Synthesis and purification	52-56
3.2.2. Characterization of synthesized compounds	56
3.3 Results and discussion	56-131
3.4 Conclusion	132
Chapter 4: Pharmacological Screening	133-155
4.1 Introduction	133-134
4.2. Materials and methods	134-154
4.2.1. Study Animals	134
4.2.2. Study Design	134
4.2.3. Antidepressant activity	134-136
4.2.4. Anti-anxiety activity	136
4.2.5. Neurotoxicity studies	136-138
4.2.6. Acute toxicity studies	138
4.2.7. Statistical analysis	138
4.3. Results and discussion	138-154
4.4. Conclusion	155
Chapter 5: Molecular Modeling	156-192
5.1. Introduction	156-158
5.2. Materials and methods	158-160
5.2.1. Selection of best MAO protein and best docking Methodology	158-160
5.2.2. Molecular docking studies of synthesized derivatives	160
5.2.3. In-silico ADME prediction of the synthesized derivatives	160
5.2.4. In-silico toxicity prediction of the synthesized derivatives	160
5.3. Results and discussion	161-191
5.4. Conclusion	192
Summary	193-197
References	198-224
Appendix	
