

TABLE OF CONTENTS

DECLARATION	IV
CERTIFICATE	V
ACKNOWLEDGMENT	VI-VII
LIST OF FIGURES	X-XII
LIST OF TABLES	XIII -XIV
ABSTRACT OF THE DISSERTATION	XV-XVIII
CHAPTER 1: INTRODUCTION	1 – 36
1.1 INTRODUCTION.....	3-8
1.2 MICROTUBULE SYSTEM AS POTENTIAL TARGET FOR ANTICANCER DRUGS.....	7-16
1.3 NOSCAPINE AND ITS ANALOGS: A NEW CLASS OF MICROTUBULE BINDING DRUGS.....	17-27
1.4 ORGANIZATION OF THE THESIS WORK.....	27-28
REFERENCES.....	29-36
CHAPTER 2: RATIONAL DESIGN OF NOVEL NOSCAPINOIDS USING LIGAND BASED (QSAR) APPROACH, THEIR THEORETICAL EVALUATION, SYNTHESIS AND BIOLOGICAL EVALUATION.	37 - 66
ABSTRACT.....	39
2.1 INTRODUCTION.....	40
2.2 MATERIALS & METHODS.....	40-50
2.3 RESULTS & DISCUSSIONS.....	50-63
2.4 CONCLUSION.....	63-64
REFERENCES.....	65-66
CHAPTER 3: MOLECULAR INSIGHT OF ISOTYPES SPECIFIC β-TUBULIN INTERACTION OF TUBULIN HETERODIMER WITH NOSCAPINOIDS.	67-124
ABSTRACT.....	69
3.1 INTRODUCTION.....	70-72
3.2 MATERIALS & METHODS.....	72-78
3.3 RESULTS & DISCUSSIONS.....	78-116

3.4 CONCLUSION.....	116-117
REFERENCES.....	118-124

**CHAPTER 4: RATIONAL DESIGN OF BIARYL PHARMACOPHORE
SUBSTITUTED NOSCAPINE DERIVATIVES AS POTENT TUBULIN BINDING
ANTICANCER AGENTS. 125-166**

ABSTRACT.....	127
4.1 INTRODUCTION.....	128-129
4.2 MATERIALS & METHODS.....	130-141
4.3 RESULTS & DISCUSSIONS.....	141-160
4.4 CONCLUSION.....	161
REFERENCES.....	162-166

CONCLUSION AND FUTURE DIRECTION 167-172

APPENDIX 173-198

LIST OF PUBLICATIONS 199-201