



## CONTENTS

<b>COVER PAGE</b>	<b>i</b>
<b>RATIFICATION PAGE</b>	<b>ii</b>
<b>STATEMENT PAGE</b>	<b>iii</b>
<b>DEDICATION PAGE</b>	<b>iv</b>
<b>PREFACE</b>	<b>v</b>
<b>CONTENTS</b>	<b>vi</b>
<b>LIST OF FIGURES</b>	<b>vii</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF APPENDICES</b>	<b>ix</b>
<b>ABSTACT</b>	<b>x</b>
<b>INTISARI</b>	<b>xi</b>
<b>CHAPTER I INTRODUCTION</b>	<b>1</b>
I.1 Background	1
I.2 Objectives	4
I.3 Research Benefits	4
<b>CHAPTER II LITERATURE REVIEW AND HYPOTHEIS FORMULATION</b>	<b>5</b>
II.1 Literature Reviews	5
II.1.1 4-Aminoquinoline	5
II.1.2 Synthesis of 4-Aminoquinoline	7
II.1.3 Nucleophilic Aromatic Substitution Reaction	8
II.2 Hypothesis Formulations and Research Plans	10
II.2.1 Hypothesis formulation I	10
II.2.2 Hypothesis formulation II	10
II.2.3 Hypothesis formulation III	10
II.2.4 Research planning	10
<b>CHAPTER III RESEARCH METHODS</b>	<b>12</b>
III.1 Materials	12
III.2 Equipments	12
III.3 Procedures	12
III.3.1 Synthesis of <i>N</i> -butyl-7-chloroquinolin-4-amine	12
III.3.2 Synthesis of <i>N</i> -benzyl-7-chloroquinolin-4-amine	13
III.3.3 Synthesis of 7-chloro-4-(piperazin-1-yl)quinoline	13
<b>CHAPTER IV RESULTS AND DISCUSSIONS</b>	<b>14</b>
IV.1 Synthesis of <i>N</i> -benzyl-7-chloroquinolin-4-amine	14
IV.2 Synthesis of <i>N</i> -butyl-7-chloroquinolin-4-amine	19
IV.3 Synthesis of 7-chloro-4-(piperazin-1-yl)quinoline	24
<b>CHAPTER V CONCLUSIONS</b>	<b>30</b>
V.1 Conclusions	30
V.2 Suggestions	30
<b>REFERENCES</b>	<b>31</b>
<b>APPENDICES</b>	<b>34</b>