

TABLE OF CONTENTS

ABSTRACT	1
INTRODUCTION	
CHAPTER 1: THYROID CANCER	3
CHAPTER 2: Map kinase signaling pathway and BRAF mutation	7
CHAPTER 3: Nuclear Factor (NF)-κB	12
3.1 <i>NF-κB transcription factors and their signaling pathways</i>	13
3.2 <i>NF-κB in cancer</i>	15
3.3 <i>NF-κB and MAPK pathway in Papillary thyroid cancer</i>	16
CHAPTER 4: METALLOPROTEINASES (MMPs)	18
CHAPTER 5: TISSUE INHIBITOR OF METALLOPROTEINASE-1	
5.1 <i>Metalloproteinase inhibitors</i>	22
5.2 <i>TIMP-1</i>	24
5.3 <i>TIMP Functions Independent of MMP Inhibition</i>	28
5.4 <i>TIMP Receptor CD63</i>	29
CHAPTER 6: PI3K/AKT PATHWAY	
6.1 <i>The PI3K/Akt pathway in human cancers</i>	32
6.2 <i>The PI3K/Akt pathway in thyroid cancer</i>	32
BACKGROUND	34
MATERIALS AND METHODS	39
RESULTS	47
DISCUSSION	61
REFERENCES	65