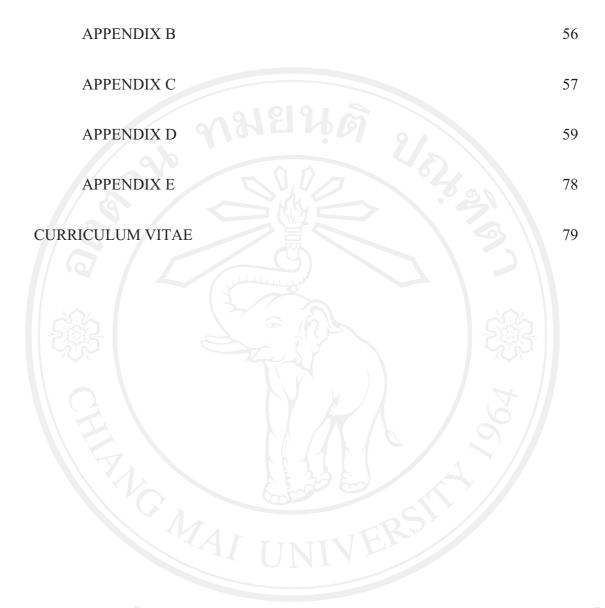
TABLE OF CONTENTS

	Page					
ACKNOWLEDGEMENT	iii					
ENGLISH ABSTRACT THAI ABSTRACT LIST OF TABLES LIST OF FIGURES						
					ABBREVIATIONS AND SYMBOLS	xiv
					CHAPTER 1 INTRODUCTION	1
					1.1 General Background	1
1.2 Diagnostic Criteria for Alcohol Dependence	2					
1.3 Genetics related to alcohol dependence	5					
1.4 Dopamine reward system	6					
1.5 ANKK1						
1.6 Purposes of this study	14					
CHAPTER 2 RESEARCH DESIGN AND METHODS						
2.1 An overview	15					
2.2 Method 2.2 Me	18					
2.2.1 Population calculation and screening assessment	18					
2.2.2 Buccal cells collection	20					
2.2.3 DNA extraction from buccal cells	20					

2.2.4 DNA amplification	21			
2.2.5 Polymorphism detection	24			
2.2.5.1 Polymerase chain reaction	24			
2.2.5.2 SNP genotyping				
2.3 Statistical analysis	27			
CHAPTER 3 RESULTS				
3.1 Method validation	28			
3.1.1 Primers set testing	28			
3.1.2 Optimal annealing temperature	28			
3.1.3 DNA quantitation	29			
3.1.4 Genotyping	31			
3.2 Population characteristics	32			
3.3 Polymorphism detection	35			
CHAPTER 4 DISCUSSION Chiang Mail University	39			
REFERENCES ghts reserve				
APPENDICES	53			
APPENDIX A	54			



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright[©] by Chiang Mai University All rights reserved

LIST OF TABLES

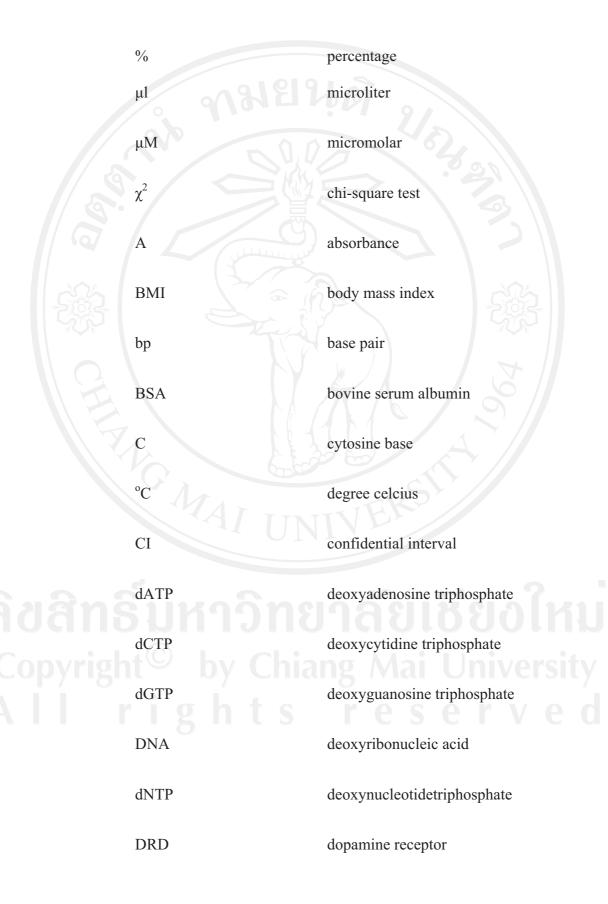
Table		Page
1	Comparison of parameters between A1+ allele patients	9
	and A1- allele patients	
2	The A1 allelic distribution studies compared in more severe and	10
	less severe dependences	
3	Primer sets for the amplification of Taq I A rs1800497	21
4	The annealing temperature range use in this study	29
5	Concentration of amplified DNA from 6 volunteers	30
6	Demographic data of moderate dependence, severe dependence and	34
	control	
7	Percentage of rs 1800497 C/T SNP alleles in subjects	36
8	Percentage of rs 1800497 C/T SNP genotypes in subjects	37
9	Numbers of A1+ allele (TC and TT genotype) and A1- allele	37
	(CC genotype) carriers in all subject groups	
10	Odds ratio of A1+/A1- allele found in subjects	37
Jai	Mean of standard drinking in 3 groups of subjects	38
12	Numbers of positive family history in 3 groups of subjects	38

LIST OF FIGURES

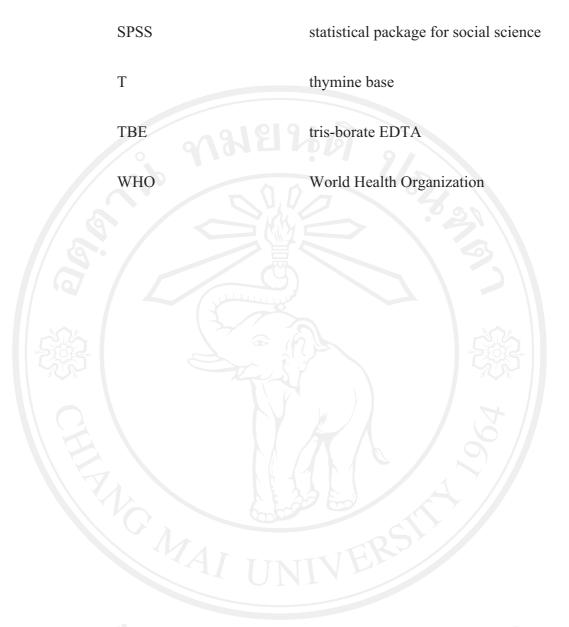
Fi	gur	e	Page
	1	The brain region associated with reward pathway	7
	2	Location of the SNPs across the region of DRD2 and ANKK1	12
	3	Summary of research design	17
	4	Polymorphism detection and DNA genotyping	26
	5 PCR products with different annealing temperature ranging		29
		From 50-57 °C	
	6	PCR products from 6 volunteers in 2 % agarose gel electrophoresis	31
	7	Digested product separated in 8.7 % acrylamide gel electrophoresis	32
		with different restriction enzyme concentration (8, 4, 2, 1 and 0 Unit/ μ l)	
	8	Analysis of C/T SNP	78

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright[©] by Chiang Mai University All rights reserved

ABBREVIATIONS AND SYMBOLS



DSM-IV	diagnostic and statistical manual of
	mental disorders IV
dTTP	deoxythymidine triphosphate
EDTA	ethylenediaminetetraacetic acid
G	guanidine base
KCI	potassium chloride
M	molar
MgCl ₂	magnesium chloride
min	minute
mM	millimolar
OPD	outpatient department
OR 41 UN	odds ratio
PCR	polymerase chain reaction
RFLP	restriction fragment length
	polymorphism
rpm ghts	round per minute
sec	second
SNP	single nucleotide polymorphism



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright[©] by Chiang Mai University All rights reserved