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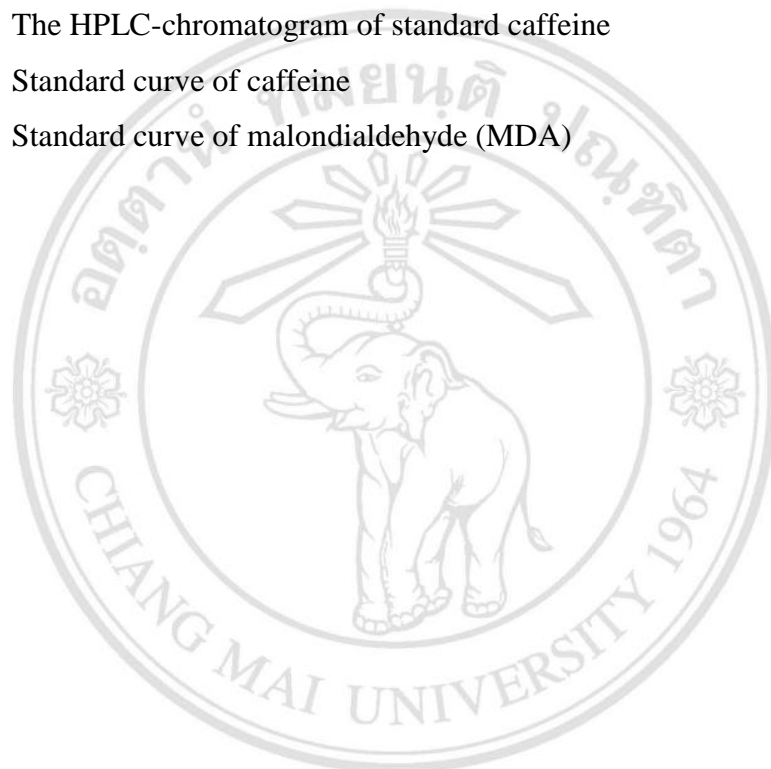
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## LIST OF ABBREVIATIONS

°C	Degree celsius
µg/mL	Microgram per milliliter
µM	Micromolar
µL	Micro liter
ABTs	2, 2-Azino-bis (3-ethylbenzothiazoline-6-sulfonic acid)
BP	Blood pressure
CAR	Continuous abstinence rate
CO	Cardiac output
COPD	Chronic obstructive pulmonary disease
C	Catechin
DNA	Deoxyribonucleic acid
DPPH	2, 2-Diphenyl-1-picrylhydrazyl
EC	Epicatechin
EGCG	Epigallocatechin gallate
ECG	Epicatechin gallate
EGC	Epigallocatechin
FDA	Food and drug administration
g	Gram
GABA	Gamma-aminobutyric acid
GSH	Glutathione
HBSS	Hanks' balanced salt solution
HR	Heart rate
H <sub>2</sub> O	Water
H <sub>2</sub> O <sub>2</sub>	Hydrogen peroxide
HO <sub>2</sub> •	Perhydroxyl radical
HPLC	High-performance liquid chromatography
IC50	Half-maximal inhibitory concentration
kg	Kilogram

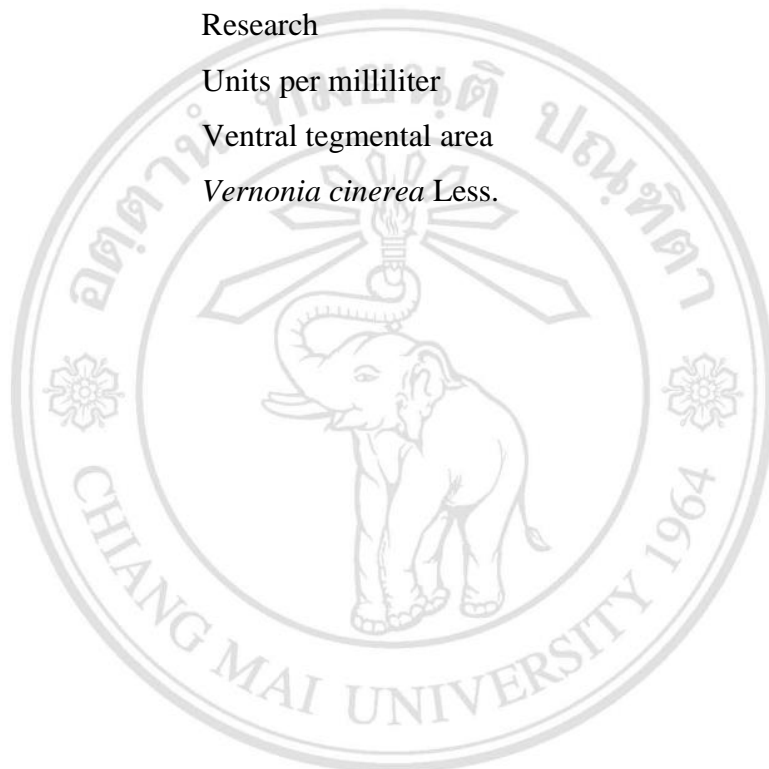


## LIST OF ABBREVIATIONS

LOD	Limit of detection
LD50	Median lethal dose
mg	Milligram
mmol/L	Millimole per liter
min	Minute
MAOs	Mitochondrial monoamine oxidases
MDA	Malondialdehyde
MHT	Medicinal herbal tea
nAChRs	Neuronal acetylcholine nicotinic receptors
NaCl	Sodium chloride
NDA	Nicotine degradation activity
NED	N-1-naphthylethylenediamine dihydrochloride
NF- $\kappa$ B	Nuclear factor kappa-light-chain-enhancer of activated B cells
nm	Nanometer
nmol/L	Nanomole per liter
NO	Nitric oxide
NOS	Nitric oxide synthase
NRT	Nicotine replacement therapy
O <sub>2</sub> <sup>•-</sup>	Superoxide radical
OECD	Organization for economic cooperation and development
OH <sup>•</sup>	Hydroxyl radical
RNS	Reactive nitrogen species
ROS	Reactive oxygen species
rpm	Revolutions per minute
RT	Retention time
sc	Subcutaneous
SNP	Sodium nitroprusside
Sulfa	Sulfanilamide

## LIST OF ABBREVIATIONS

SV	Stroke volume
TAC	Total antioxidant capacity
TBA	Thiobarbituric acid
TISTR	Thailand Institute of Scientific and Technological Research
U/mL	Units per milliliter
VA	Ventral tegmental area
VC	<i>Vernonia cinerea</i> Less.



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## ข้อความแห่งการริเริ่ม

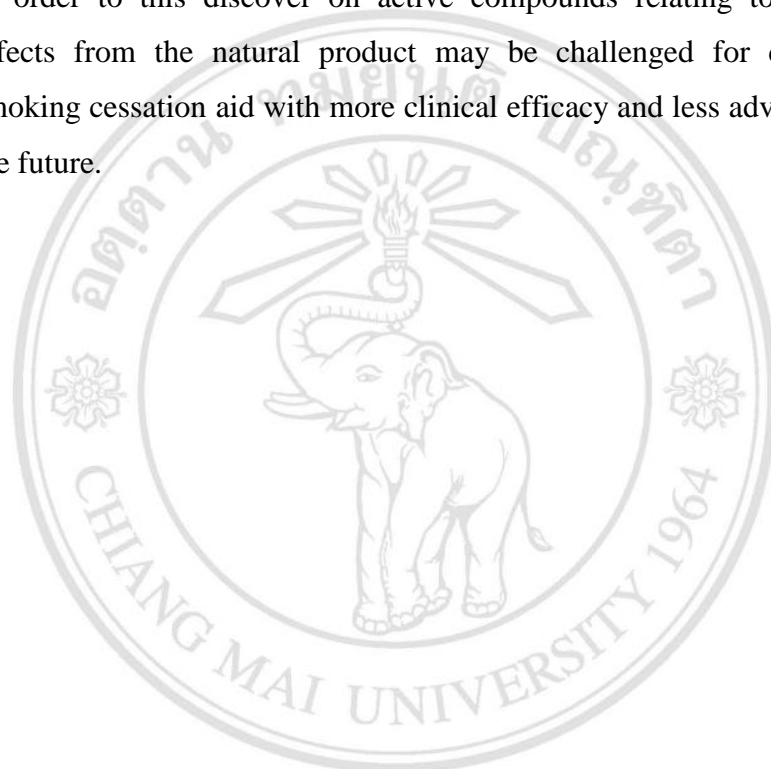
- 1) วิทยานิพนธ์นี้ได้นำเสนอการศึกษาศาสตร์ออกฤทธิ์ของสารสกัดหญาดอกขาว และฤทธิ์เกี่ยวกับสารสื่อประสาทที่เกี่ยวข้องกับการคิดนิโคติน อนุมูลอิสระและผลกระทบต่อโครโมโซมในสัตว์ทดลอง
- 2) เพื่อช่วยในการหยุดบุหรี่ของผู้ที่สูบบุหรี่โดยใช้ผลิตภัณฑ์ธรรมชาติตัวใหม่ เพื่อพัฒนา งานวิจัยเป็นการแพทย์ทางเลือกในการเลิกบุหรี่ใหม่ๆ ที่มีประสิทธิภาพ และมีผลข้างเคียงน้อยต่อไป



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## STATEMENT OF ORIGINALITY

- 1) The first time of the study of active compounds in *Veronia cinerea* L. extracts and activity on neurotransmitters relating to nicotine addiction, free radicals and the mutagenicity effect on chromosome in animal model.
- 2) In order to this discover on active compounds relating to anti-nicotine effects from the natural product may be challenged for developing to smoking cessation aid with more clinical efficacy and less adverse effects in the future.



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