



## STUDY OF GLUTAMATERGIC TRANSMISSION IN METHAMPHETAMINE-DEPENDENT RATS

WALAILUK KERDSAN
สำนักพอชมุด มาจริมยาลัยมรลวร วันคงทะเมียน <b>: 6 M.A. 2551</b>
100000000000000000000000000000000000000
เตบเรียกหนังสือ AC • ก็ฝา
244EW 2001

A Thesis Submitted to the Graduate School of Naresuan University
in Partial Fulfillment of the Requirements
for the Master of Science Degree in Anatomy
May 2008
Copyright 2007 by Naresuan University

This thesis entitled "Study of Glutamatergic Transmission in Methamphetamine-Dependent Rats" submitted by Walailuk Kerdsan in partial fulfillment of the requirements for the Master of Science Degree in Anatomy is hereby approved.

St. So. Chair
(Assistant Professor Sutisa Thangi, Ph.D.)
Committee Committee
(Assistant Professor Samur Thanoi, Ph.D.)
H. Krvevissy ana Committee
(Hathairat Kruevaisayawan, Ph.D.)
Holand Committee
(Assistant Professor Ekkasit Kumarnsit, Ph.D.)
รากยาลัยงประชา

Approved

K. Rupertwileul

(Assistant Professor Kanungnit Pupatwibul, Ph.D.)

Dean of the Graduate School

May 2008

## **ACKNOWLEDGEMENTS**

Firstly, I would like to express my greatest gratitude and appreciation to my advisor Assistant Professor Dr. Sutisa Thanoi for her continuous supervision, guidance, understanding, and support throughout my study. My appreciation to her devotion for me for the preparation of this thesis and defense examination.

I would like to express my gratefulness to my co-advisor Assistant Professor Dr. Samur Thanoi, who has provided me valuable suggestion, encouragement, pieces of advice with many aspects of academic writing and helpfulness throughout my study. My gratefulness to Dr. Onravee Khongsombat for her valuable guidance and instruction.

I would like to particularly thank Naresuan University Research Fund and Thailand Research Fund (TRF) for the financial supports. I also acknowledge Naresuan University, Payao Campus, for the scholarship under the staff development project. I would like to thank the Department of Anatomy, Faculty of Medical Science, Naresuan University, for facility support.

My wholehearted thanks to all of my teachers for their instructions, my friends and colleagues of the neuroscience laboratory unit, Department of Anatomy, Faculty of Medical Science, Naresuan University for their sincere helps and cheerful support. I would also like to spread my gratefulness to Ms.Rachanee Chanasong and Mr.Ekarin Chulikorn for their assistances, valuable advices and encouragements.

Furthermore, I would especially like to thank the Graduate School, Naresuan University for supporting my thesis book making.

Finally, I would not miss to thank my beloved family for their love, care, financial support, and encouragement throughout my life.

Walailuk Kerdsan