

ACKNOWLEDGEMENTS

The present work was completed with the assistance of many people. I would first like to thank to my Major advisor, Assoc. Prof. Arunporn Itharat, for her help, guidance, stimulating suggestions and encouragement to my research and thesis writing.

I would like to thank my co-advisor, Assoc. Prof. Sutatip Bhamarapravati, who helped to correct my thesis and enabled the further refinement of this work. Additionally, I would like to thank Ajarn Pimolvann Tappayuthpijarn for her assistance on various techniques.

I would like to thank Mr. Thanongsak Jonganurak, the botanist at the Forest Herbarium (BKF), National Park, Wildlife and Plant Conservation Department, who identified voucher herbarium specimens of Ma-kiang.

I am grateful to all the lecturers and staff of the Department of Graduate Studies, Faculty of Medicine, Thammasat University for their valuable advice.

I deeply thank to Mrs. Vanida Jansom and Miss Chisanucha Sattaponpan staff of nutraceutical laboratory for their assistance in this research.

Finally, I am grateful to my family for their support, moral support, entirely care and love. I dedicate usefulness of this thesis to my father, my mother and all the teachers who have taught me since my childhood.

Thammasat University
Pathumthani, Thailand

Chalerm Jansom
2008