

ACKNOWLEDGMENTS

I am overwhelmed with gratitude for my thesis advisor, Asst. Prof. Dr. Theerapol Sirinarumitr who has given me graduate study opportunity for his help, encouragement, careful guidance, countless technical and moral helpful suggestion and his patience. Without him the study would never have been accomplished and it would be the hardship. I would sincerely like to thank my major subject committee members Asst. Prof. Dr. Somchai Pornbanlualap and Dr. Vipha Hongtrakul for their support throughout my graduate study.

I am grateful and in debted to my boss, Assoc. Prof. Kitcha Urairong head of Department of Animal Production Medicine and Farm Resource for his value advice and support.

I am also very much in debted to Dr. Kannika Siripattaraprawat of Department of Veterinary Pathology since the early years of my study in laboratory practice and her cheerful assistance.

I would also like to acknowledge faculty of Veterinary Medicine, Kasetsart University for the educational opportunity and the partial financial support. I thank Mrs. Wilairat Chumsing of Virus Laboratory, Kamphaengsaen Diagnostic Division and many people from Kamphaengsaen and Bang Khen Veterinary Teaching Hospitals for assistance during my study. Finally, my appreciation devotes to my parent and my family who always give me heartfelt supports.

Pattra Moonjit
September, 2006