ANTI-INFLAMMATORY ACTIVITIES OF AQUEOUS AND ETHANOLIC EXTRACTS

FROM Anoectochilus

burmannicus

PHATCHARAPORN BUDLUANG

MASTER OF SCIENCE
IN BIOCHEMISTRY

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

GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
MARCH 2016

ANTI-INFLAMMATORY ACTIVITIES OF AQUEOUS AND ETHANOLIC EXTRACTS FROM

Anoectochilus burmannicus

PHATCHARAPORN BUDLUANG

A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN BIOCHEMISTRY

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

GRADUATE SCHOOL, CHIANG MAI UNIVERSITY

MARCH 2016

ANTI-INFLAMMATORY ACTIVITIES OF AQUEOUS AND ETHANOLIC EXTRACTS FROM

Anoectochilus burmannicus

PHATCHARAPORN BUDLUANG

THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN BIOCHEMISTRY

Examination Committee:	Advisory Committee:
Tominiganul P. Chairman	Pitchaleum P. Advisor
(Lect. Dr. Piya Temviriyanukul)	(Lect. Dr. Pornsiri Pitchakarn)
Leve Chemoner Member	Ansa Bunun
(Asst. Prof. Dr. Teera Chewonarin)	(Lect. Dr. Arisa Bonness)
(Lect Dr. Pornsiri Pitchakarn)	
Ansa Bunnum Member	
(Lect. Dr. Arisa Bonness)	

14 March 2016 Copyright © by Chiang Mai University

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my thesis advisor, Dr. Pornsiri Pitchakarn for her support constant encouragement throughout the course of this thesis. I am most grateful for not only her teaching and the thesis guidance, but also her thoughtfulness. I would not have achieved this far and this thesis completed without all the support that I have always received from her.

I also would like to extend my gracious thanks to Dr. Arisa Bonness and Asst. Prof. Dr. Ariyaphong Wongnoppavich for valuable suggestions, training, and consultation during this thesis work. I am greatly indebted to them for giving me motivation and building my confidence being able to finish the graduate study. In addition, I am grateful to Dr. Piya Temviriyanukul at the Mahidol University and Asst. Prof. Dr. Teera Chewonarin at the Chiang Mai University for suggestions and help. Moreover, I would like to give many thanks to fellows, friends, and all staff members in the Department of Biochemistry, Faculty of Medicine, Chiang Mai University who have always provided me with valuable advice and assistance when needed.

Finally, I most gratefully acknowledge my family for support, love, guidance and kindness during this study. Without family support and encouragement, this thesis could not be completed. My family give me inspiration and strength in my life.

Copyright[©] by Chiang Mai University All rights reserved

Phatcharaporn Budluang