

**EXPRESSION OF GM2 ACTIVATOR PROTEIN  
AS A POTENTIAL BIOMARKER FOR  
LUNG CANCER**

**LADDAWAN POTPROMMANEE**

**DOCTOR OF PHILOSOPHY**

**IN BIOTECHNOLOGY**

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**GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY  
JULY 2014**

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**LADDAWAN POTPROMMANEE**

**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN BIOTECHNOLOGY**

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BIOMARKER FOR LUNG CANCER**

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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN BIOTECHNOLOGY

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9 July 2014

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## ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my supervisor, Asst. Prof. Dr. Lalida Shank for her valuable advice, guidance and for giving me extraordinary experiences throughout this study. I also appreciate the kindness of Prof. Dr. Shui-Tein Chen, for his precious advice, guidance, enthusiasm, insightful contribution and encouragement throughout my research and for financial support during my stay at Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan.

I would like to thank Dr. Kongsak Boonyapranai, Dr. Padchane Sangthong, Asst. Prof. Busyamas Chewaskulyong, M.D. and Dr. Paitoon Aobchey for their helpful advice. Moreover, many thanks, in particular, go to Prof. Chong-Jen Yu, Chein-Hung Chen and Haou-Tzong Ma who gave worthy suggestions, inspiration and support to my work during my stay in Taiwan. I am thankful to people in the laboratory for their friendship and assistance.

I would like to express sincere gratitude to the Maharaj Nakron Chiang Mai Hospital, Chiang Mai, Thailand and National Taiwan University Hospital, Taipei, Taiwan for providing all kinds of experimental specimens throughout the study. I am indebted of all patients and healthy donors for their urine and serum samples. The help from the nurses at Chemotherapy ward, and the staff in Clinical Chemistry Laboratory, Maharaj Nakron Chiang Mai Hospital for collection of specimen is highly appreciated.

Finally, a very special thank is expressed to my parents for unconditional love, understanding and endless encouragement which have enabled me to achieve my Ph.D.

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