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TO

MY PARENTS

FOR

THEIR LOVES AND PATIENCES

QUANTITATIVE AMOUNT OF ALPHA GLOBIN MESSENGER RNA  
IN THE HAEMOGLOBIN H DISEASE

MR. WARAWUT CHULALAKSANANUKUL

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messenger RNA in the Haemoglobin H disease

By

Mister Warawut Chulalaksananukul

Department

Botany

Thesis Advisor

Mrs. Pranee Fucharoen

Associate Professor Sakol Panyim, Ph.D.

---

Accepted by the Graduate School, Chulalongkorn University in  
Partial Fulfillment of the Requirments for Master's Degree.

.....*S. T. Bunnag*.....Dean of Graduate School  
(Associate Professor Supradit Bunnag, Ph.D.)

Thesis committee.

.....*Pannee Chinoruk*.....Chairman.  
(Associate Professor Pannee Chinoruk)

.....*Praanee Fucharoen*.....Member.  
(Mrs. Pranee Fucharoen)

.....*Sakol Panyim*.....Member.  
(Associate Professor Sakol Panyim Ph.D.)

.....*Suthat Fucharoen*.....Member  
(Assistant Professor Suthat Fucharoen, M.D.)

.....*Mukda Nudasomboon*.....Member  
(Assistant Professor Mukda Nudasomboon)

.....*Pensri Pootrakul*.....Member  
(Associate Professor Kunying Pensri Pootrakul,  
M.D., Dip.Cli.Sci. (Ped.))





Thesis Title Quantitative amount of alpha globin messenger RNA in the Haemoglobin H disease

Name Mr. Warawut Chulalaksananukul.

Thesis advisors Mrs. Pranee Fucharoen.  
Associate Professor Sakol Panyim, Ph.D.

Department Botany.

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#### ABSTRACT

Hb H disease is the  $\alpha$ -thalassemia occurred from the combination of  $\alpha$ -thalassemia 1 and  $\alpha$ -thalassemia 2 gene ( $\alpha$ -thal<sub>1</sub>/ $\alpha$ -thal<sub>2</sub>) or  $\alpha$ -thalassemia 1 and Hemoglobin Constant Spring gene ( $\alpha$ -thal<sub>1</sub>/Hb CS). Evidences from the clinical and hematological data showed that  $\alpha$ -thal<sub>1</sub>/Hb CS is more severe than  $\alpha$ -thal<sub>1</sub>/ $\alpha$ -thal<sub>2</sub>.

The study to compare the amount of  $\alpha$  globin mRNA in normal individual, patient with Hb H  $\alpha$ -thal<sub>1</sub>/ $\alpha$ -thal<sub>2</sub> and with  $\alpha$ -thal<sub>1</sub>/Hb CS types. Total cellular RNA were extracted from peripheral blood by phenol/chloroform extraction and hybridized with  $\alpha$  JW101 or  $\beta$  JW102 recombinant plasmid to quantitate  $\alpha$  or  $\beta$  globin mRNA respectively.

The average  $\alpha/\beta$  globin mRNA ratio in  $\alpha$ -thal<sub>1</sub>/ $\alpha$ -thal<sub>2</sub> and  $\alpha$ -thal<sub>1</sub>/Hb CS were  $0.426 \pm 0.04$  and  $0.335 \pm 0.02$  respectively and has been significantly different at the 0.001 level from t test.



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