CHAPTER 5

CONCLUSION

In this study, the method of polymerase chain reaction (PCR) was applied to examine the 3.7 kb deletion of alpha globin gene. The normal alpha globin gene and alpha 3.7 kb deletion were amplified by difference pair of primers. The sample can be characterized the genotype by comparing appearance and disappearance of the amplification products on agarose gel electrophoresis.

The optimize method was used to detect alpha 3.7 kb deletion ($-\alpha^{3.7}$) in 400 subjects from Northern part of Thailand. Out of these, 67 (16.65 %) possess of alpha 3.7 kb deletion, the genotype could be identified to $-\alpha^{3.7}/\alpha\alpha$ in 58 (14.5%), $-\alpha^{3.7}/-\alpha^{3.7}$ in 5 (1.25%), and $--/-\alpha^{3.7}$ in 4 (1%). The hematological parameters of all samples were determined in this study. In alpha thalassemia 2 carriers ($-\alpha^{3.7}/\alpha\alpha$), all hematological parameters range on the standard cut off of the normal value, no statistical abnormalities can be detected (P = 0.05). The result suggested that alpha thalassemia 2 carriers ($-\alpha^{3.7}/\alpha\alpha$) can not be identified by hematological routine screening test. The PCR is very useful for detection of these carriers.

Characterize the molecular defects in population is importance for management and control the spreading of the disease. Detection of alpha 3.7 kb deletion ($-\alpha^{3.7}$) by PCR technique is convenient, reliable, and suitable for evaluated its prevalence in population. In order to use for genetic counseling, prenatal diagnosis and prevention of the alpha thallassemia in the future.