CHAPTER 5

Conclusion

The prevalence of α-thalassemias in northern Thai prigravidarum was still high as 35.89%. This finding necessitates the implementation of the prevention and control of this common genetic disorder by screening for α-thalassemia genotypes.

Recombinant scFv antibody specific to Hb Bart's was successfully constructed and produced in our laboratory. No cross-reactivity to HbA ($\alpha_2\beta_2$), HbF ($\alpha_2\gamma_2$), HbS ($\alpha_2\beta_2^S$), HbE ($\alpha_2\beta_2^E$), HbA_2 ($\alpha_2\delta_2$) and HbH (β_4) was observed by Western blot analysis and indirect ELISA. The detection sensitivity of Hb Bart's in blood using dot blot ELISA was 5 μg/μL. The scFv antibody produced in this study could solve the disadvantage of mouse hybridoma that gradually lost the synthesis and secretion of monoclonal antibody during long-term cultivation. The scFv antibody might be useful in development of a sensitive and specific immunoassay for diagnosis of α-thalassemias.