

Information on Doctoral thesis of Fellows Pham Thu Thuy

1. Full name: Pham Thu Thuy
2. Sex: Female
3. Date of birth: October 18, 1982
4. Place of birth: Hai Phong
5. Admission decision number: Decision 3201/QĐ-SĐH, dated 08/11/2010 by the President of Vietnam National University, Hanoi.
6. Changes in academic process: None
7. Official thesis title: Expression of genes encoding anti-CD20 antibody and test to detect CD20 in serum of cancer patients with non-Hodgkin lymphoma
8. Major: Genetics
9. Code: 62.42.01.21
10. Supervisors: Assoc.Prof.Dr. Tran Minh Đào

Assoc.Prof.Dr. Le Quang Huan

11. Summary of the new findings of the thesis

- (1). Single-chain antibody (scFv) and single-chain antibodies added sections CH2 (scFv-CH2) and CD20 antigen were generated by gene technology for the first time in Vietnam.
- (2). Antibodies generated (scFv and scFv-CH2) have binding affinity to the CD20 antigen and CD20 expression on the surface of malignant B lymphocytes (Raji).
- (3). Test scFv-CH2 antibody to detect CD20 in the serum of cancer patients of non-Hodgkin lymphoma.

12. Practical applicability

Using recombinant DNA technology to produce scFv, scFv-CH2 antibody specific CD20 which can be used in the diagnosis of non-Hodgkin lymphoma.

13. Further research directions

- Using scFv-CH2 antibody to identify CD20 in serum of patients with non-Hodgkin lymphoma cancer by method of flow cytometry.

- Researching creates diagnosis kit blood cancer of non-Hodgkin's lymphoma based on recombinant anti-CD20 antibody.
- Studing the applicability of the recombinant anti-CD20 antibody in the treatment of non-Hodgkin lymphoma.

14. Các công trình đã công bố có liên quan đến luận án

- Pham Thu Thuy, Tran Minh Dao, La Thi Huyen, Le Quang Huan (2011), "Cloning and sequencing gene coding CD20", *Journal of practical medicine*, 8, pp. 413-416.
- Pham Thu Thuy, Le Thi Hanh, La Thi Huyen, Ninh Thi Tuyet Lan, Le Quang Huan (2011), "Construction of expression vector for gene coding recombinant antibody CD20 in *E. coli*", *Journal of Viet Nam medicine*, 2, pp. 32-36.

Pham Thu Thuy, Le Thi Hanh, La Thi Huyen, Le Quang Huan, Tran Minh Dao (2011), "Optimal conditions for the expression of recombinant anti-CD20 antibody", *Journal of Military Phamaco – Medicine*, 7, pp. 50-56.

- Pham Thu Thuy et al. (2012), *Expression and purifycation of recombinant anti-CD20 antibody*, Summary report, International conference of birth defects, Ha Noi, dated 11/5/2012, pp. 41-42.
- Pham Thu Thuy, La Thi Huyen, Le Quang Huan (2012), "Ditermined activation of recombinant anti-CD20 antibody", *Journal of Viet Nam medicine*, 8(2), pp. 129-132.