

Information on Doctoral thesis of Fellows Nguyen Thi Thu Thuy

1. Full name: Nguyen Thi Thu Thuy

2. Sex: Female

3. Date of birth: February 08, 1977

4. Place of birth: Hanoi, Vietnam

5. Admission decision number: 2385/SĐH dated 29/06/2007 by President of Vietnam National University, Hanoi

6. Changes in academic process:

- Change the direction of research decision number 2571/SĐH by Rector of VNU University of Science

7. Official thesis title: "Determination of viruses related human diseases on Bats in Vietnam".

8. Major: Microbiology

9. Code: 62.42.40.01

10. Supervisors: Le Thi Quynh Mai, MD, Ph.D

Pham Van Ty, Ph.D, Prof

11. Summary of the new findings of the thesis:

11.1 Identifying antibodies against Nipah, SARS –CoV, Bana, Japanese encephalitis and Chikungunya viruses in Bats species, Viet Nam, 2006-2009.

- A total 549 bat sera were tested for Nipah virus (NiV), SARS – coronavirus (SARS – CoV), Bana virus, Japanese encephalitis (JEV) and Chikungunya virus (CHIK) infection using ELISA method. Specimens were found Ab positive for NiV (6,2%), SARS – CoV (2,0%), Bana (5,5%), JEV (1,6%) and CHIK (2,0%). IgG-ELISA indicator is only valid for screening and orienting virus infection but cannot be used in the diagnosis to determine the cause of zoonotic studies (Bat species).

- Two bat's (*Roussetus lesschenaulti*) sera of 549 sera total were introduced neutralizing antibody against NiV virus (0,36%) by NT50 test.

- Only one sera from *Roussetus lesschenaulti* bat have introduced neutralization antibody against SARS – CoV viruses (0,18%).

- There are no sera confirmed as Bana, JEV –or CHIK infections by serology testing..

11.2. Determining potential infections from bats on residents who have epidemiological histories linked to bats.

- A total 308 sera were tested, twenty-three (23) sera were indentified antibody against Nipal virus by ELISA test, and one of them was introduced neutralization antibody against NiV and has reached 0.32%. No samples were identified as SARS-CoV infection by serological tests..

- There are some risky factors relating to infectious exposure from bats when analysing results from 314 interviewees, of whom 16.9% using bat meat as food, 4.1% drinking bat blood, 0.95% being bitten, 2.6% using bat Guano to fertilizer plants and 69.4% eating wildlife meat

- Among 23 individuals having antibody against NiV, three of them have history of contacting bats through bat body fluids, urine /feces and eating bat meat.

12. Practical applicability, if any: The results from our initial studies have provided basic information, for additional information, enriching the necessary data on the role of bats in the infectious disease.

13. Further research directions, if any: Surveillance for some infectious diseases related to Bats in the unknown fever patients with clinical symptoms of infectious diseases and healthy residents linking to bats.

14. Thesis-related publications:

- Nguyen Thi Thu Thuy, Le Thi Quynh Mai, Nguyen Co Thach, Nguyen Bao Ngoc, Đang Tuan Đạt, Pham Cong Tien and Futoshi Hasebe (2010), "Surveillance for Nipah & Sars – CoV virus among bats in Tay Nguyen (central highlands),2008-2009", *Journal of Preventive Medicine* 20 (6), pp. 23-27.

- Nguyen Thi Thu Thuy, Le Thi Quynh Mai, Futoshi Hasebe (2011), "Surveillance for some infectious diseases among bats in northern Viet Nam, 2006-2009", *Journal of Preventive Medicine* 21 (3), pp, 57-6.

- Futoshi Hasebe, Nguyen Thi Thu Thuy, Shingo Inoue, Fuxun Yu, Yoshihiro Kaku, Shumpei Watanabe, Hiroomi Akashi, Dang Tuan Dat, Le Thi Quynh Mai and Kouichi Morita (2012), "Serologic Evidence of Nipah Virus Infection in Bats, Vietnam", *Emerging Infectious Disease*'s 18(3),pp 536-537.