

## Information on Doctoral thesis of Fellows Le Thi Hoang Yen

1. Full name: Le Thi Hoang Yen
2. Sex: Female
3. Date of birth: 14/01/1976
4. Place of birth: Hung Yen
5. Admission decision number: Decision 2385/ SĐH, dated 29/06/2007 by the President of Vietnam National University, Hanoi.
6. Changes in academic process: No
7. Official thesis title: "Study on the diversity of Hyphomycetes isolated from fallen leaf (litter fungi) collected in some Vietnam National forests"
8. Major: Microbiology
9. Code: 62 42 40 01
10. Supervisors: Assoc. Prof. Duong Van Hop

Prof. Katsuhiko Ando

### 11. Summary of the new findings of the thesis

- This is the first study which used new techniques to study diversity of fungi isolated from fallen leaves collected from the National Parks of Vietnam. From 57 leaf litter fungi collected from 4 National Parks of Viet Nam: Ba Be, Bach Ma, Ma Da and Phu Quoc 1041 fungal strains were isolated, 264 strains had difference in morphology were used to study the fungal diversity in fallen leaves of these National Forests.

- A total 6 classes, 15 orders, 27 families, 85 genera and 195 species were found out for the diversity of litter fungi in these national Parks.

- *Acerosispora didyma* gen. et sp. nov.; *Acerosispora vietnamica* gen. et sp. nov and *Hamatispora phuquocensis* gen. et sp. nov were described. *Acerosispora didyma* gen. et sp. nov.; *Acerosispora vietnamica* gen. et sp. nov were suspected to belong to new class of Pucciniomycotina.

- Five new species were described: *Condylospora vietnamensis* sp. nov., *Polylobatispora ambigua* sp. nov., *Isthmolongispora phuquocensis* sp. nov., *Trisulcosporium exiguum* sp. nov., *Trisulcosporium phuquocense* sp. nov. Among them, *Condylospora vietnamensis* sp. nov. was published on Mycoscience.

- Screening on the lignocellulose degradation enzyme showed that: The fungi which are dominant in national forests (*Trichoderma*, *Aspergillus*, *Fusarium*, *Penicillium* and *Phoma*) had high ligninolytic enzyme activity.

12. Practical applicability, if any:

- This thesis has been provided 246 fungal strains to Vietnam Type Culture Collection- Institute of Microbiology and Biotechnology- National University, Ha Noi. All of these fungi have been identified based on morphological observation and partial sequence of the 28S rRNA analysis (D1D2 region). Furthermore, all of these fungi have been screened for their lignocellulolytic enzyme activity. These fungal strains can be transferred to the other academic institutes in Viet Nam or abroad as referent. Even that they could be sold for enzyme companies as product strains.

- The thesis has been provided one type strain for Mycobank.

13. Further research directions, if any: Publish the new taxon on MycoScience.

14. Thesis-related publications:

- Le Thi Hoang Yen, Nguyen Thi Phuong Thuy, Nguyen Anh Duc., Nguyen Anh Tuan., Duong Van Hop (2009), "Primary screening on the lignocellulolytic enzyme from hyphomycetes isolated from fallen leaves in National Parks of Viet Nam" *Journal of genetic*, V, pp. 15-21.

- Yen L.T.H., Minh N.H., Hop D.V., Dung N.L., Ando K. (2009), *Mycological diversity and biological activities of soil fungi isolated in Trung Khanh nature reserve*, 6<sup>th</sup> ACM meeting-Hanoi 2009.

- Le Thi Hoang Yen, Nguyen Anh Tuan, Le Van Hung, Nguyen Thi Hong Nhung and Duong Van Hop (2010), *Screening for chitinolytic fungi isolated from Vietnam and optimizing cultural conditions for the production of chitinase by Trichoderma reesei*, Annual reports of International center for Biotechnology- Osaka University, tr. 449-460.

- Yen L.T.H., Inaba S., Tsurumi Y., Ban Y., Hop D.V., Dung N.L., Ando K. (2010), *News about Aquatic Hyphomycetes Isolated from Fallen Leaves in Vietnam*, JSPS Asian CORE Program (2009-2013), Hanoi Meeting "Next-Generation Bioproduction Platform Leveraging Subtropical Microbial Bioresources", P.03.

- Le Thi Hoang Yen, Duong Van Hop, Yasuhisa Tsurumi, Katsuhiko Ando (2011), "Diversity of hyphomycetes isolated from fallen leaves collected in Catien National Forest in Viet Nam", *Journal of genetic*, V, pp. 19-29.

- Le Thi Hoang Yen, Duong Van Hop, Yasuhisa Tsurumi, Katsuhiko Ando (2011), *Diversity of endophytic fungi isolated from intact leaves collected in Catien National Forest in Viet Nam*, National scientific conference on ecology and microbial resources 4th, Viet Nam, pp. 1057-1066.

- Yen L.T.H, Inaba S., Tsurumi Y., Ban Y., Hop D.V., Dung N.L., Ando .K (2012), "*Condylospora vietnamensis*, a new Ingoldian hyphomycete isolated from fallen leaves in Viet Nam", *Mycoscience*, 53, pp. 326-329.
- Yen L.T.H, Hop D.V., Tuan N.A., Giang N.T, Gao Z., Ando K., Hiyamuta S., Kondo R., (2012), *Study on xylanase from Aspergillus niger VN09-F0119 isolated from preserved forest in Viet Nam*, YSS- Ha noi, pp. 69-74.
- Gao Z., Hop D.V., Yen L.T.H., Ando K., Hiyamuta S. and Kondo R. (2012), "The production of  $\beta$ -glucosidases by *Fusarium proliferatum* NBRC109045 isolated from Vietnamese forest", *AMB Express*. 2(1):49.
- Le Thi Hoang Yen, Dao Thi Luong, Nguyen Anh Tuan, Duong Van Hop (2013), *Preliminary study on diversity of Fusarium isolated from soil collected in National Forests and and from diseased plants in Vietnam*, National Biotechnology Conference, pp. 673- 678.