

CURRICULUM VITAE

1. Full name: Nguyen Duc Huy			
2. Date of Birth: 1983/04/17		3. Male/Female: Male	
4. Qualifications: Researcher			
5. Position: Vice director, head of Department of Microbiology			
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10. The training process			
Level of training	Training School	Specialization	Year of graduation
College	Danang University of Science and Technology	Biotechnology	2006
Masters	Chonbuk National University, South Korea	Biotechnology	2011
Doctor	Chonbuk National University, South Korea	Biotechnology	2014
Postdoc			
11. Professional experience			
Time	Working position	Working unit	Address working unit
2017-present:	Deputy Director	Institute of Biotechnology, Hue University	
2017-present:	Head of Department of Microbiology	Institute of Biotechnology, Hue University	
2014-present	Researcher	Institute of Biotechnology, Hue University	
2007-2014	Researcher	Institute of	

		Resources, Environment and Biotechnology, Hue University	
2006-2007	Researcher	Center for Resources, Environment and Biotechnology, Hue University	

12. Research interests

1. General molecular biology
2. Metabolic engineering
3. Applied microbiology and
biotechnology
4. Protein and enzyme engineering
5. Biomass, bioenergy and
bioremediation

13. Publications

Scientific papers

1. Nguyen Huu Thuan Anh, Hoang Tan Quang, **Nguyen Duc Huy**. 2007. Study on storage proteins diversity in some soybean (*Glycine max* L.) cultivars using SDS-PAGE technique. *Hue University Journal of Science*. 37: 15-22
2. Hoang Tan Quang, **Nguyen Duc Huy**, Truong Thi Bich Phuong, Nguyen Hoang Loc. 2008. Two dimensional electrophoresis of protein in drought-tolerant rice (*Oryza sativa* L.) lines selected from *in vitro* cultures. *Vietnamese Journal of Biotechnology*. 6(4): 439-443.
3. **Nguyen Duc Huy**, Seung-Wook Kim, Seung-Moon Park. 2011. Heterologous expression of endo-1,4-beta-xylanaseC from *Phanerochaete chrysosporium* in *Pichia pastoris*. *Journal of Bioscience and Bioengineering*. 111(6): 654-7.
4. Nguyen Hoang Loc, Hoang Tan Quang, Nguyen Bao Hung, **Nguyen Duc Huy**, Truong Thi Bich Phuong and Tran Thi Thu Ha. 2011. *Trichoderma asperellum*

- Chi42 Genes encode Chitinase. *Mycobiology* 39(3): 182-186.
5. **Nguyen Duc Huy**, Saravanakumar Thiyagarajan, Yu-Lim Son and Seung-Moon Park. 2011. Heterologous Expression of Endo-1,4-beta-xylanaseA from *Phanerochaete chrysosporium* in *Pichia pastoris*. *Mycobiology* 39(2): 121-124.
 6. **Nguyen Duc Huy**, Saravanakumar Thiyagarajan, Dae-Hyuk Kim and Seung-Moon Park. 2012. Cloning and characterization of a novel bifunctional acetyl xylan esterase with carbohydrate binding module from *Phanerochaete chrysosporium*. *Journal of Bioscience and Bioengineering*. 115(5): 507-13.
 7. Nguyen Hoang Loc, Nguyen Sy Cong, Do Van Giap, Nguyen Thi Quy Hoa, Hoang Tan Quang, **Nguyen Duc Huy**. 2012. Production of recombinant NPRC10 protease in 14-L fermentation scale. *European Journal of Experimental Biology*, 2(4): 913-918.
 8. **Nguyen Duc Huy**, Saravanakumar Thiyagarajan, Yoon-E Choi, Dae-Hyuk Kim, and Seung-Moon Park. 2012. Cloning and characterization of a thermostable endo-arabinanase from *Phanerochaete chrysosporium* and its synergistic action with endo-xylanase. *Bioprocess and Biosystems Engineering*. 36(6): 677-85.
 9. **Nguyen Duc Huy** and Seung-Moon Park. 2012. Cloning and expression of putative beta-xylosidase B from *Phanerochaete chrysosporium*. 2012. *Vietnamese Journal of Biotechnology*. 10(4A): 785-791.
 10. Cu Le Nguyen, Tran Nguyen Thao, **Nguyen Duc Huy**, Hoang Tan Quang, Nghiem Van Tung, Nguyen Hoang Loc. 2012. Characterization of extracellular protease from *Bacillus pumilus* I7. *Vietnamese Journal of Biotechnology*. 10(4A): 825-831.
 11. **Nguyen Duc Huy**, Thayumanavan Palvannan, Tae-Ho Kwon and Seung-Moon Park. 2013. Characterization of a recombinant bifunctional xylosidase/arabinofuranosidase from *Phanerochaete chrysosporium*. *Journal of Bioscience and Bioengineering*. 116(2): 152-9.
 12. **Nguyen Duc Huy**, Cu Le Nguyen, Jeong-Woo Seo, Dae-Hyuk Kim, Seung-Moon Park. 2015. Putative endoglucanase PcGH5 from *Phanerochaete chrysosporium* is a β -xylosidase that cleaves xylans in synergistic action with endo-xylanase. *Journal of Bioscience and Bioengineering*. 119(4): 416–420.

13. Nguyen Hoang Loc, Le My Tieu Ngoc, Hoang Tan Quang, **Nguyen Duc Huy**, Nguyen Ngoc Luong. 2015. Cloning and expression of two genes coding endo- β -1,4-glucanases from *Trichoderma asperellum* PQ34 in *Pichia pastoris*. *Chemical Papers*. 70(3): 284–293.
14. Hoang Tan Quang, Trinh Huu Tan, Nguyen Thanh Giang, Nguyen Duc Huy, Tran Minh Duc, Le My Tieu Ngoc. 2015. Initial study on on in vitro culture of *Paris polyphylla* Smith for saponin production. Pham Van Dong University Journal of Science and Technology. 7: 5-11.
15. **Nguyen Duc Huy**, Cu Le Nguyen, Nguyen Hoang Loc, Myoung-Suk Choi, Dae-Hyuk Kim, Jeong-Woo Seo, and Seung-Moon Park (2016). Characterization of a novel manganese dependent endoglucanase belongs in GH family 5 from *Phanerochaete chrysosporium*. *Journal of Bioscience and Bioengineering*. 121(2): 154-159.
16. Hoang Tan Quang, Trinh Huu Tan, Nguyen Thanh Giang, Nguyen Duc Huy, Truong Thi Phuong Lan. 2016. Effects of methyl jasmonate on saponin accumulation in cultured suspension cells of *Paris polyphylla* Smith. *Proceeding of the 2nd national conference on biological research and teaching in Vietnam*. 1176-1183.
17. Nguyen Hoang Loc, Nguyen Thanh Giang, **Nguyen Duc Huy**. 2016. Effect of salicylic acid on expression level of genes related with isoprenoid pathway in centella (*Centella asiatica* (L.) Urban) cells. *3 Biotech*. 6(1): 86
18. Nguyen Thanh Giang, **Nguyen Duc Huy**, Le The Ha Thanh, Nguyen Hoang Loc. 2016. Efficiency of the combination of salicylic acid, yeast extract and methyl jasmonate on asiaticoside production in centella (*Centella asiatica* (L.) urban) cells. *Plant Cell Biotechnology and Molecular Biology*. 17(1-2): 64-71.
19. Hoang Tan Quang, Cai Thi Quynh Thoa, Trinh Huu Tan, Nguyen Thanh Giang, **Nguyen Duc Huy**, Truong Thi Bich Phuong and Van Thi Yen. 2016. Study on genetic diversity of *Paris polyphylla* population from Vietnam and China. *Plant Cell Biotechnology and Molecular Biology*. 17(1-2): 57-63.
20. Nguyen Thanh Giang, Hoang Tan Quang, **Nguyen Duc Huy**, Nguyen Huu Thuan Anh, Truong Thi Phuong Lan, Nguyen Hoang Loc. 2016. Effect of elicitor

- on asiaticoside accumulation in Centella (*Centella asiatica* (L.) urban) cells. *Vietnam National University Journal of Science*. 31(4S): 44-49.
21. Nguyen Hoang Loc, Nguyen Thanh Giang, **Nguyen Duc Huy**, Truong Thi Phuong Lan. 2017. Accumulation of madecassoside - a major component of centelloside - in centella (*Centella asiatica* (L.) Urban) cells elicited by salicylic acid. *Periodicum Biologorum*. 119(1): 81-85.
22. **Nguyen Duc Huy**, Nguyen Thi Thanh Tien, Le Thi Huyen, Hoang Tan Quang, Truong Quy Tung, Nguyen Ngoc Luong, Seung-Moon Park. 2017. Screening and production of manganese peroxidase from *Fusarium* sp. on residue materials. *Mycobiology*. 45(1): 52-56.
23. Dang Thi Thanh Ha, Le Kim Tuan, Dinh Thi Kim Thien, Pham Thi Ngoc Lan, Hoang Tan Quang, Tran Thuy Lan, **Nguyen Duc Huy**. 2018. Cloning and sequencing laccase 3 (*Folac3*) from *Fusarium oxysporum*. *Hue University Journal of Science*. 127(1C): 1-10.
24. Duong Duc Hoang Sinh, Tran Vu Ngoc Thi, Le Thi Ha Thanh, Pham Thi Ngoc Lan, Nguyen Hoang Loc, **Nguyen Duc Huy**. 2018. Isolation of some bacterial strains from dioxin-contaminated soil in A luoi, Thua Thien Hue. *Hue University Journal of Science*. 127(1C): 141–148.
25. Truong Thi Phuong Lan, **Nguyen Duc Huy**, Nguyen Ngoc Luong, Nguyen Van Nghi, Trinh Huu Tan, Le Viet Quan, Nguyen Hoang Loc 2018. Identification and characterization of genes in curcuminoid pathway of *Curcuma zedoaria* Roscoe. *Current Pharmaceutical Biotechnology*. DOI: 10.2174/1389201019666181008112244
26. Nguyen Thi Anh Thu, Ngo Thi Tuong Chau, Le Van Thien, **Nguyen Duc Huy**, Nguyen Tran Me Khue, Nguyen Bao Hung, Nguyen Ngoc Luong, Le Thi Anh Thu, Nguyen Hoang Loc. 2018. Extra-chromosomal expression of nat05 gene encoding an alkaline serine protease from *Bacillus subtilis* N05. *Biotechnologia* (in press).

Abstract for Conferences

1. Hoang Tan Quang, **Nguyen Duc Huy**, Truong Thi Bich Phuong, Nguyen Hoang

- Loc. 2008. Two dimensional electrophoresis of protein in drought-tolerant rice (*Oryza sativa* L.) lines selected from *in vitro* cultures. Conference on Biotechnology of Central of Vietnam.
2. Nguyen Hoang Loc, Nguyen Thi Thuy Mien, **Nguyen Duc Huy**, Truong Thi Bich Phuong, Do Thi Bich Thuy. 2008. Separation of extracellular amylase from *Bacillus subtilis* using aqueous two phase system polyethyleneglycol/potassium phosphate. Conference on Biotechnology of Central of Vietnam.
 3. **Nguyen Duc Huy**, Ae-Young Mo, Dae-Hyuk Kim, Seung-Moon Park. 2010. Cloning an endo-1,4- β -xylanase A from *Phanerochaete chrysosporium*, comparison of the expression level of its with α -factor secretion signal peptides and purification in *pichia pastoris*. New Frontiers in Microbiology and Biotechnology – 2010 International Symposium & Annual Meeting. South Korea.
 4. **Nguyen Duc Huy**, Ae-Young Mo, Dae-Hyuk Kim, Seung-Moon Park. Molecular cloning of a gene encoding the alkaline protease from *Bacillus polyfermenticus* and Its expression in *Bacillus subtilis* BD170. 2010. International Meeting of the Federation of Korean Microbiological Societies, South Korea.
 5. Seung-Moon Park, **Nguyen Duc Huy**, Ae-Young Mo, Yu-Lim Son, Han-Sung Park and Dae-Hyuk Kim. Cloning of an Endo-1,4- β -Xylanase C from *Phaenerochaete chrysosporium*, and Its Expression in *Pichia pastoris*. 2010. 2010 KSBB fall meeting and international symposium, South Korea.
 6. **Nguyen Duc Huy**, SaravanaKumar Thiyagarajan, Hyun-Young Kim, and Seung-Moon Park. Heterologus expression and characterization of acetyl xylan esterase 2 from *Phanerochaete chrysosporium*. 2012. Bioenergy Korea Conference 2012 International Symposium, South Korea.
 7. **Nguyen Duc Huy**, Ae-Young Mo, Seung-Moon Park. Characterization of a novel thermostable endo-arabinanase from *Phanerochaete chrysosporium* and its biomass degradation on the synergistic with xylanase. 2012. 15th International Biotechnology Symposium and exhibition: Innovative Biotechnology for a green World and beyond, South Korea.

8. **Huy Nguyen Duc**, Ae-Young Mo, Da-Mi Kwon, and Seung-Moon Park. Characterization of a Recombinant β -Xylosidase from *Phanerochaete chrysosporium*. 2012. 2012 KSBB fall meeting and international symposium. The Korean Society for Biotechnology and Bioengineering. South Korea.
9. **Nguyen Duc Huy**, Thiyagarajan SaravanaKumar, Ae-Young Mo, Da-Mi Kwon, Dae-Huyk Kim, and Seung-Moon Park. 2013. Enhanced saccharification of hemicellulose in the water soluble wheat arabino- xylan and pretreated barley straw by using recombinant enzyme cocktail. 2013 KSBB Spring Meeting and International Symposium, South Korea.
10. Thiyagarajan SaravanaKumar, **Nguyen Duc Huy**, Ae-young Mo, Da-Mi Kwon, Dae-Hyuk Kim and Seung-moon Park. 2013. Immobilization of peracetic acid producing acetyl xylan esterase on Fe₃O₄-chitosan nanoparticles: Optimization of immobilization using Response Surface Methodology(RSM). 2013 KSBB Spring Meeting and International Symposium, South Korea.
11. **Nguyen Duc Huy**, Cu Le Nguyen, Han-Sung Park, and Seung-Moon Park. 2013. Optimization of hemicelluloses saccharification by recombinant hemicellulase cocktail in the water soluble Wheat arabinoxylan and pretreated barley straw. 2013 International meeting of the Federation of Korean Microbiological sciences, South Korea.
12. **Nguyen Duc Huy**, Saravanakumar Thiyagarajan, Ae-Yong Mo, and Seung-Moon Park. 2013. Characterization of the Carbohydrate binding module of endo- β -1,4-mannanase from *Phanerochaete chrysosporium* on bacterial nanocellulose. 2013 International meeting of the Federation of Korean Microbiological sciences, South Korea.
13. **Nguyen Duc Huy**. Thayumanavan Palvannan, Dae-Hyuk Kim,, and Seung-Moon Park. 2013. Enhanced saccharification of hemicellulose in the water soluble wheat arabinoxylan and pretreated barley straw by using response surface methodology. 2013 Bioenergy Korea conference and the 9th KSMB annual meeting international symposium, South Korea.
14. Cu Le Nguyen, **Nguyen Duc Huy**, Ae-Young Mo, Dae-Hyuk Kiem, Seung-Moon Park. 2014. Characterization a thermostable and metal dependent

- endoglucanase PcRg5 from *Phanerochaete chrysosporium*. 2014 KSBB Spring Meeting and International Symposium, South Korea.
15. **Nguyen Duc Huy**, Cu Le Nguyen, Ae-Young Mo, Dae-Hyuk Kim, Seung-Moon Park. 2014. Characterization a novel glycoside hydrolase family 12 β -xylosidase from *Phanerochaete chrysosporium* which enhances xylans and pretreated barley straw saccharification in synergistic with recombinant Xylanase. 2014 KSBB Spring Meeting and International Symposium, South Korea.
 16. **Nguyen Duc Huy**, Thiyagarajan SaravanaKumar, Myoung-Suk Choi, Dae-Huyk Kim, Seung-Moon Park. 2014. Characterization of a novel manganese dependent endoglucanase belongs in GH family 5 from *Phanerochaete chrysosporium*. 2014 KSBB Fall Meeting and International Symposium, South Korea.
 17. **Nguyen Duc Huy**, Nguyen Hoang Loc, Seung-Moon Park. 2016. Development recombinant enzyme cocktail for hemicelluloses saccharification. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.
 18. Cu Le Nguyen, **Nguyen Duc Huy**, and Seung-Moon Park. 2016. Cloning and characterization of β -Mannanase and endoglucanase from white rot fungus *Phanerochate chrysosporium*. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.
 19. Nguyen Thanh Giang, **Nguyen Duc Huy**, Le Thi Ha Thanh and Nguyen Hoang Loc. 2016. Combined effects of salicylic acid, yeast extract and methyl jasmonate on asiaticoside production in centella (*Centella asiatica* (L.) Urban) cells. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.
 20. Nguyen Hoang Loc, Le My Tieu Ngoc, Hoang Tan Quang, **Nguyen Duc Huy**, Nguyen Ngoc Luong. 2016. Cloning and expression of two genes coding endo- β -1,4-glucanases from *Trichoderma asperellum* PQ34 in *Pichia pastoris*. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.
 21. Nguyen Hoang Loc, Nguyen Thanh Giang, **Nguyen Duc Huy**. 2016. Expression

levels of *CaSQS*, *CabAS* and *CaCYS* genes in centella (*Centella asiatica*) cells elicited by salicylic acid. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.

22. Nguyen Thanh Giang, **Nguyen Duc Huy**, Truong Thi Phuong Lan, Nguyen Hoang Loc. 2016. Effect of elicitor on centelloside accumulation of *Centella asiatica* cells. The 7th AFOB Regional symposium - Asian Biotechnology: Research and Application, Vietnam.

23. **Nguyen Duc Huy**, Nguyen Thi Thanh Tien, Le Thi Huyen, Nguyen Thi Be, Hoang Tan Quang, Nguyen Thanh Giang, Truong Quy Tung. 2016. High laccase production from *Fusarium oxysporum* using rice straw medium. The 1st International Conference on Applied Microbiology, Vietnam.

24. **Nguyen Duc Huy**, Nguyen Thi Thanh Tien, Le Thi Huyen, Nguyen Thi Be, Hoang Tan Quang, Nguyen Thanh Giang, Truong Quy Tung, Nguyen Ngoc Luong. 2016. Isolation and manganese peroxidase production from a *Fusarium* sp. strain. The 1st International Conference on Applied Microbiology, Vietnam.

14. Research projects

Numerical order	Name of project	Coordinator or member	Time
1	Isolation and identification manganese peroxidase production white rot fungi in Thua Thien Hue province	Principal investigator	2015-2016
2	Peroxidases production from wood decay fungi using rice straw medium	Principal investigator	2016-2017
3	Detoxification of antibiotics commonly used in aquaculture by <i>Fusarium oxysporum</i>	Principal investigator	2017-2018
4	Cloning and sequence two laccase genes from <i>Fusarium oxysporum</i>	Principal investigator	2018-2019
5	Development microorganism solution against <i>Vibrio</i> sp. for prevention and	Principal investigator	2018-2020

	treatment diseases on shrimp, fishes		
6	Investigation the role of <i>Fusarium oxysporum</i> laccase system in response to the synthetic dyes and characterization of some recombinant key laccases	Principal investigator	2018-2020
7	Production of recombinant laccase and application on synthesis dyes degradation	Principal investigator	2018-2020
8	Identification of key genes involved in curcumin biosynthesis of <i>Curcuma zeodoria</i>	Key member	2016-2017
9	Isolation and application of dioxin degrading bacteria from Aluoi, ThuaThienHue	Key member	2016-2018

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