

## CURRICULUM VITAE

<b>Assoc.Prof. NGUYEN Hoang Anh</b> Address: Faculty of Food Science and Technology, Vietnam National University of Agriculture, Trau Quy, GiaLam Hanoi, Vietnam Tel: 0084.978973346 Fax: 0084.438276554 E-mail: hoanganhcntp@vnua.edu.vn			
<b>Qualifications</b>			
<i>Degree</i>	<i>University</i>	<i>Specialization</i>	<i>Graduation year</i>
PhD	University of Natural resources and Life Science, Vienna, Austria	Food Biotechnology	2012
Master	Vrije Universiteit Brussels (VUB), Brussels, Belgium	Molecular Biology	2006
Bachelor	Hanoi University of Science, Vietnam national University	Biology	2000
<b>Professional experience</b>			
<i>Duration</i>	<i>Place</i>	<i>Responsibility</i>	<i>Address</i>
5/2001 – 9/2004	Department of Biochemistry and Nutrition, Faculty of Food science and Technology	Lecturer	Hanoi
11/2003- 1/2004	Louvain la Neuve University	Visiting Researcher	Belgium
10/2004- 9/2006	Vrije Universiteit Brussels (VUB)	Master student	Belgium
10/2006- 10/2008	Department of Biochemistry and Food Biotechnology, Faculty of Food science and Technology, Hanoi University of Agriculture	Head of Department	Hanoi
11/2008 – 1/ 2012	University of Natural resources and Life Science	PhD student	Vienna, Austria
11/2010-12/2010	Laboratory of Biotransformation, Institute of Microbiology	Visiting Researcher	Praha, Czech Republic
2/2012 to 2018	Faculty of food science and technology, Vietnam National University of Agriculture	Lecturer, Vice Dean of Faculty,  Head: Central Lab of Food	Hanoi

		Science and Technology	
2018 up to now	Faculty of food science and technology, Vietnam National University of Agriculture	Lecturer, Dean of Faculty, Head: Central Lab of Food Science and Technology	Hanoi
<b>Teaching responsibilities</b>			
<b><i>Courses for undergraduate programs:</i></b> General Biochemistry, Food Biotechnology, Molecular Biological and Immunological Techniques in Food Analysis.			
<b><i>Courses for master programs:</i></b> Advanced Biochemistry, Advanced Biochemistry and Food Biotechnology, Food contaminant analysis			
<b>Research areas</b>			
<ul style="list-style-type: none"> <li>- Isolation, selection and application of food grade microorganisms (Lactic acid bacteria, Bacillus, Fungi) in food production in order to improve food safety and quality</li> <li>- Production of enzymes from food grade wild type/recombinant microorganisms and application of enzymes in food production</li> <li>- Isolation, selection of food grade bacteria producing antimicrobial peptides, and production and application of bacteria/ peptides in food preservation.</li> <li>- Food analysis</li> </ul>			
<b>Projects</b>			
<b><i>Project titles</i></b>		<b><i>Duration</i></b>	<b><i>Sponsor</i></b>
<b><u>Leader of projects</u></b>			
- B2007-11-56: Optimization of culture conditions and enzyme purification to produce Fructosyltransferase and apply in production of functional fructooligosaccharide (FOS)		2007-2008	Ministry of Education and Training
- T2007-07-51: Determining optimal conditions of $\beta$ -D-fructofuranosidase activity for production of functional Fructooligosaccharid (FOS) from sucrose		2007	Hanoi University of Agriculture
- VN02/2013, Vietnam – Austrian Scientific and Technological cooperation program: “Food-grade xylanase expression systems for bioconversion of xylan wastes from Vietnamese corncob into valuable prebiotic xylo-oligosaccharides”.		2013 - 2015	Vietnam Ministry of Science and technology, and BMWF of Austria
- VN/2015, Vietnam – Austrian Scientific and Technological cooperation program: “Food-grade expression systems for high level expression of enzymes applied in production of prebiotic oligosaccharides”.		2015 - 2016	Vietnam Ministry of Science and technology, and BMWF of Austria

- Screening and identification of food grade Bacteria and Fungi producing protease and lactase from different sources of Vietnam	2016 2017	-	Research agreement between Biovet J.CS and Vietnam National University of Agriculture
- Beta-galactosidase of food grade bacteria: from screening to production and preliminary application	2017 2018	-	Viet Nam - Belgium Project
T2017-08-57: Beta-galactosidases of food-grade bacteria: from screening to production and preliminary application	2017 2018	-	Vietnam National University of Agriculture
08/2020/TN: Study on the histamine degradation process in traditional fish sauce by using immobilized whole bacterial cells	2020 2023	-	National Foundation for Science and technology Development (Nafosted)
- 609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP: “Khảo sát thị trường lao động tại các trường đại học Việt Nam - Labour Market Observatory in Vietnam universities (LABMOVIE)”	2019 2022	-	Erasmus+ project
<b><u>Member of projects</u></b>			
-B2013.01.05: Production of N-acetyl-D-glucosamine from colloidal chitin using endochitinase and hexosaminidase	2013 2015	-	Ministry of Education and Training
-106.16 – 2012.23: Identification of the function and the regulation of genes expressed in <i>Bacillus licheniformis</i> under phosphate starvation conditions for the construction of nutrient regulated expression systems	2016		National Foundation for Science and technology Development (Nafosted)
-Extraction of essential oil from <i>Perilla frutescens</i> leaves and application in fresh fork preservation	2013 2015	-	Vietnam national University of Agriculture
- Screening, characterization and production of antimicrobial peptides produced by GRAS (Generally reconized as safe) bacteria from vietnamese fermeted food	2015 - 2017		Vietnam – Belgium Project

- Coordination member: Implementation of International Master Program "Master in Food Technology, Safety and Quality Management	2013 2018	-	ARES- CUD, Belgium
- Application of Biotechnoly in animal feed production for Hanoi area from waste beer yeast	2016 2017	-	Hanoi Department of Science and Technology
- Reseach on process of fruit brewing Technology	2017 2018	-	Hanoi Department of Science and Technology
- Application of microbiological technology in reduction of histamin content of traditional fish sources	2018 2020	-	Ministry of industry and trade of the socialist republic of Vietnam
99-2017.15. Effect of heat treatment on concentration of beta casomorphins in A1A1 and A2A2 milk and in their digests following in vitro simulated-gastro intestinal digestion	2018 2020	-	National Foundation for Science and technology Development (Nafosted)
- HNQT/SPĐP/08.19: Breeding of <i>japonica</i> rice variety for bran oil processing in Vietnam	2019 2020	-	Bilateral and multilateral research cooperation program until 2020

## Publications

- 1) Nguyen Tien Thanh, Tran Thi Na, Nguyen Thi Lam Doan, **Nguyen Hoang Anh**.  $\beta$ -galactosidase from *Lactobacillus fermentum* FV4: from Strain Identification to Characterization of Galactooligosaccharide Production of Enzyme, Vietnam Journal of Agricultural Sciences 2021, 19 (6), 745-755.
- 2) Nguyen Thanh Huyen, Le Thi Mai Anh, Nguyen Thi Bich Thuy, Ngo Xuan Nghien, Tran Thi Dao, Pham Thi Thu Trang, Vu Thi Ly, **Nguyen Hoang Anh**, Hoang Hai Ha, Do Thi Hanh, Nguyen Xuan Canh. Isolation, Selection and Application of Lactic Acid Bacteria for Testing Process of Producing Fermented Oyster Mushroom, Vietnam Journal of Agricultural Sciences, 19 (3), 379-388.
- 3) Tran Thi Thu Hang, **Nguyen Hoang Anh**. Determination and evaluation of chemical properties of several fish sauce products in Hanoi. Journal of Science and Technology, Ministry of Industry and Trade, 42, 36 – 39.
- 4) Duc Doan Nguyen, Vicky Ann Solah, Stuart Keith Johnson, **Hoang Anh Nguyen**, Thi Lam Doan Nguyen, Thi Lan Huong Tran, Thi Khuyen Maic, Francesco Busetid. Identification and

- quantification of beta-casomorphin peptides naturally yielded in raw milk by liquid chromatography-tandem mass spectrometry 2019. *LWT - Food Science and Technology*, 111, 465-469.
- 5) Tran Thi Thi Hang, **Nguyen Hoang Anh**, Nguyen Thi Tinh, Bui Thi Thu Hien, Chu Dinh Binh. Determination of histamine using high performance liquid chromatography: application in research on degradation of histamine in fish sauce by bacteria. *Journal of analytical sciences*, 2019, 24(4B).
- 6) Nguyen Thi Huyen, Tran Van Toan, **Nguyen Hoang Anh**, Pham Hong Thai. The effects of some factors on the jelly yield and quality of honeybee subspecies *Apis Mellifera ligustica* in Hung Yen province, Vietnam. *Journal of Animal Husbandry Sciences and Technics* 2019, 241, 70-75.
- 7) Nguyen Thi Lam Doan, **Nguyen Hoang Anh**. *Bacillus* with potential probiotic properties from chicken intestine. *Vietnam Journal of Agricultural Sciences* 2018, 16(7), 689 – 697.
- 8) Yen Linh Thao Dang, Thu Hang Thi Tran, Lam Doan Thi Nguyen, **Anh Hoang Nguyen**, Thanh Thuy Thi Nguyen. Isolation and Screening of Histamine-Producing Bacteria from the First Six Months of the Cat Hai Fish Sauce Fermentation Process. *Vietnam Journal of Agricultural Sciences* 2019, 1 (3), 220-229.
- 9) Le Thi Thao, **Nguyen Hoang Anh**, Tran Thi Dieu Thuy, Nguyen Van Giang. *Journal of Agricultural and rural development* 2018, 2, 88 – 94.
- 10) Trinh Thi Thu Thuy, Nguyen Quoc Trung, Tong Van Hai, **Nguyen Hoang Anh**. Production and Characterization of Lignin Peroxidase from White Rot Fungal Strain T14. *Vietnam Journal of Agricultural Science* 2018, 8, 763 – 771.
- 11) Ho Tuan Anh, **Nguyen Hoang Anh**. Application of bio-product from *Bacillus subtilis* and industrial enzymes for hydrolyzing beer yeast. *Journal of Vietnam Agricultural Science and Technology* 2017, 82(9), 86-89.
- 12) **Hoang Anh Nguyen**. Expression of chitinase gene from *Bacillus licheniformis* DSM13 in *E.coli* T7 and biochemical characterisation of recombinant enzyme. *Journal of Agricultural Science* 2017, 15(9), 1230 – 1238.
- 13) **Hoang Anh Nguyen**, Thi Lan Vu. Isolation, selection and identification of *Aspergillus oryzae* from some traditional fermented foods producing high salt tolerant neutral protease. *Journal of Agricultural Science* 2017, 15(9), 1213 – 1220.
- 14) **Nguyen Hoang Anh**, Tran Thi Na. Selection and Identification of *Bacillus* Producing Enzyme Thermostable  $\beta$ -Galactosidase. *Journal of Agricultural Science* 2017, 15(8), 1070 – 1076.
- 15) **Nguyen Hoang Anh**, Nguyen Van Giang. Selection, Identification of *Bacillus*.spp. Producing protease, and Determination of enzyme thermostability. *Journal of Agricultural Science* 2017. 15(8), 1062 – 1069.
- 16) Phạm Thuy Trang, **Nguyen Hoang Anh**, Nguyen Van Giang. Effects of cultural parameters on extracellular invertase production of *Saccharomyces cerevisiae* strains 259 and 263. *Journal of Vietnam Agricultural Science and Technology* 2017, 8(81): 72 – 77
- 17) **Nguyen Hoang Anh**, Nguyen Van Giang, Le Thanh Ha. Production of N-Acetyl-glucosamine from chitin by using recombinant endochitinase and  $\beta$ -hexosaminidase. *Journal of Vietnam Agricultural Science and Technology* 2017, 8(81): 109 – 114.
- 18) **Nguyen Hoang Anh**, Ho Tuan Anh. Selection of lactic acid bacteria producing acidic tolerant enzyme  $\beta$ -galactosidase (pH 2 - 3). *Journal of Vietnam Agricultural Science and Technology* 2017,

7(80): 79-83.

19) Nguyen Thanh Trung, Nguyen Minh Hung, Nguyen Huy Thuan, Trinh Thanh Trung, Nguyen Quoc Trung, Trinh Thi Thu Thuy, **Nguyen Hoang Anh**. Isolation and characterization of the phytase gene promoter from *Bacillus licheniformis* DSM13. *Journal of Agricultural Science* 2017, 15 (3): 298 – 305

20) Mai-Lan Pham, Tatjana Leister, **Hoang Anh Nguyen**, Cuong Do-Bien, Anh Pham-Tuan, Dietmar Haltrich, Montarop Yamabhai, Thu-Ha Nguyen, Tien-Thanh Nguyen. Immobilization of galactosidases from *Lactobacillus* on chitin using a chitin-binding domain. *J Agric Food Chem* 2017, 65 (14): 2965–2976.

21) **Nguyen Hoang Anh**, Nguyen Thi Thanh Thuy, Nguyen Vinh Hoang: Isolation, Selection of  $\beta$  - Glucanase Producing *Bacillus* spp. from Cow Rumens and Primary Characterization of Enzyme. *Journal of Agricultural Science* 2017, 15 (1): 85 – 91.

22) Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**, Nguyen Vinh Hoang: Screening and characterization of  $\beta$ -glucanase produced by *Bacillus* spp isolated from Muong Khuong Chili sauce. International conference on Agriculture Development in the context of international intergration: Opportunities and challeges. Agricultural University Press, 2016 (ISBN 978-604-924-245-8): 228 - 235

23) Nguyen Thi Thanh Thuy, Vu Thi Huyen Trang, Vu Quynh Huong, Trinh Thi Thu Thuy, Nguyen Thi Lam Doan, Tran Thi Na, **Nguyen Hoang Anh**: Isolation, identification, and preliminary characterization of *Bacillus subtilis* with broad – range antibacterial activity from Muong Khuong chilli sauce. *Journal of Science and development* 2016, 14 (7): 1009-1015.

24) Pham Thi Diu, Nguyen Thi Lam Doan, Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**: antimicrobial activity and preliminary characterization of peptides produced by lactic acid bacteria isolated from some vietnamese fermented foods. *Journal of Science and development* 2016, 14 (7): 1044-1051.

25) Nguyen Thi Lam Doan, Hoang Thi Van, Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**: isolation and selection of lactic acid bacteria from vietnamese fermented pork meat product with antimicrobial activity and characterization of bacteriocin. *Journal of Science and development* 2016, 14(7): 1089-1099.

26) Tien Thanh Nguyen, **Hoang Anh Nguyen**, Thu Ha Nguyen, Dietmar Haltrich, Sakacin-based expression vectors for *Lactobacillus* cell factories. *Proceeding of conference: innovation of food engineering and bioengineering: from research to industry* Hanoi Oct, 2016, 148 – 156.

27) Nguyen Thanh Trung, Nguyen Minh Hung, Nguyen Huy Thuan, **Nguyen Hoang Anh**, Le Thi Hoi, Thomas Schweder, Britta Jürgen: A Phosphate Starvation-1 Inducible Ribonuclease of *Bacillus licheniformis*. *Journal of Microbiology and Biotechnology* 2016.

28) Barbara Geiger, Hoang-Minh Nguyen, Stefanie Wenig, **Hoang Anh Nguyen**, Cindy Lorenz, Roman Kittl, Geir Mathiesen, Vincent G.H. Eijnsink, Dietmar Haltrich, Thu-Ha Nguyen: From by-product to valuable components: Efficient enzymatic conversion of lactose in whey using  $\beta$ -galactosidase from *Streptococcus thermophilus*. *Biochemical Engineering journal* 2016.

29) **Nguyen HA**, Nguyen TH, Haltrich D: Human milk Oligosaccharides: chemical structure, Functions and enzymatic synthesis. *J Science and Development* 2012, 5 (10): 693 – 706

- 30) **Nguyen HA**, Nguyen TH, Nguyen TT, Peterbauer CK, Mathiesen G, Haltrich D: Chitinase from *Bacillus licheniformis* DSM13: Expression in *Lactobacillus plantarum* WCFS1 and biochemical characterisation. *J Protein expression and Purification* 2011, 59 (10): 5617-5624.
- 31) **Nguyen HA**, Nguyen TH, Kren V, Eijsink VG, Haltrich D, Peterbauer CK: Heterologous Expression and Characterization of an N-Acetyl- $\beta$ -D-hexosaminidase from *Lactococcus lactis* ssp. *lactis* IL1403. *J Agric Food Chem* 2012, 60 (12): 3275-81.
- 32) Nguyen TT, **Nguyen HA**, Lozel Arreola R, Mlynek G, Djinovic-Carugo K, Mathiesen G, Nguyen TH, Haltrich D: Homodimeric  $\beta$ -galactosidase from *Lactobacillus delbrueckii* subsp. *bulgaricus* DSM 20081: expression in *Lactobacillus plantarum* and biochemical characterization. *J Agric Food Chem* 2012, 60 (7): 1713-172.
- 33) Iqbal S, Nguyen TH, **Nguyen HA**, Nguyen TT, Maischberger T, Kittl R, Haltrich D: Characterization of a Heterodimeric GH2 beta-Galactosidase from *Lactobacillus sakei* Lb790 and Formation of Prebiotic Galacto-oligosaccharides. *J Agric Food Chem* 2011, 59(8):3803-3811.
- 34) **Nguyen Hoang Anh**, Ngo Xuan Manh, Nguyen Huong Thuy, Ngo Xuan Trung: Determining optimal conditions of  $\beta$ -D-fructofuranosidase activity for production of functional Fructooligosaccharid (FOS) from sucrose. *J Science and Development* 2008, 6 (3): 2890 – 293.
- 35) Ngo Xuan Mạnh, **Nguyen Hoang Anh**, Nguyen Van Lam, Tran Thi Lan Huong: Application of enzyme amylase in production of maltose syrup from cassava starch. Ứng dụng các enzyme amylase trong sản xuất đường maltose (mạch nha) từ tinh bột sắn. *Biochemistry* 2005, 1.

### Conferences

- 1) ECHEMENDIA BLANCO Dannele, **Nguyen Hoang Anh**, VAN DRIESSCHE EDILBERT, DE GREVE HENRI, BEECKMANS SONIA: Expression and partial characterization of the seed lectins from *Pterocarpus indicus* and *Pterocarpus echinatus*. Abstracts of the 194th meeting of the Belgian Society of Biochemistry and Molecular Biology 2006: 47 – 47.
- 2) ECHEMENDIA BLANCO Dannele, **Nguyen Hoang Anh**, VAN DRIESSCHE EDILBERT, DE GREVE HENRI, BEECKMANS SONIA: Sequencing of the seed lectin encoding gene from three *Pterocarpus* spp. Abstracts of the 194th meeting of the Belgian Society of Biochemistry and Molecular Biology 2006: 48 – 48.
- 3) ECHEMENDIA BLANCO Dannele, **Nguyen Hoang Anh**, VAN DRIESSCHE EDILBERT, DE GREVE HENRI, BEECKMANS SONIA: Sequencing, modeling and heterologous expression of *Pterocarpus* lectins. International Lectin Meeting - Interlec 23, UK 2008.
- 4) **Nguyen Hoang Anh**, Nguyen Tien Thanh, Le Thanh Hà. Chitinase from *Bacillus licheniformis* DSMZ13: Expression in *E.coli* T7 and Biochemical characterization. Vbfoodnet conference, november 24 – 26, 2015, Nhatrang University, Vietnam. Best poster award
- 5) **Nguyen Hoàng Anh**, Thu-Ha Nguyen, Dietmar Haltrich. Prebiotic oligosaccharides resembling Human milk oligosaccharides: From enzyme production to enzymatic synthesis. The 41<sup>th</sup> Congress on Science and Technology of Thailand (STT41), . Session S9: Molecular Biotechnology, november 6 – 8, 2015, Suranaree University of Technology, Nakhon Rachasima, Thailand. Invited speaker.
- 6) **Nguyen Hoàng Anh**, Thu-Ha Nguyen, Dietmar Haltrich. Prebiotic oligosaccharides: from enzyme production to enzymatic synthesis. The 1<sup>st</sup> joint Symposium on Biotechnology between

Vietnam National University of Agriculture, Vietnam and Gyeongsang National University, Korea.  
Hanoi, 14 – 15<sup>th</sup> January 2016

7) Nguyen Thi Hong, Vu Thi Lan, Pham Thi Diu, Le My Hanh, Nguyen Vinh Hoang, Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**. Vegetable supply chain in Dong Anh district, Hanoi city in terms of nutrition quality and product safety, and consumer health. A4NH Vietnam Partner Day “*Sharing progress and planning ahead for collaborative research*”, Hanoi, Vietnam, 20-23 March 2018.

8) Nguyen Thi Hong, Nguyen Thi Dien, Pham Thi Diu, **Nguyen Hoang Anh**. Selection, identification of lactic acid bacteria producing cold active  $\beta$ -galactosidase for enzyme hydrolysis of lactose in fresh milk. The 1st International Conference on “Innovative Food Ingredients and Food Safety” 12-13 September 2018, Bangkok, Thailand.

#### **Technical procedures, technical advances:**

##### **\* Technical process**

1) Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**, Le Thi Ngoc Thuy, Dang Thao Yen Linh. Technical process for production and treatment of red flesh dragon fruit juice by using enzyme, 2019. Vietnam National University of Agriculture

2) Nguyen Thi Thanh Thuy, **Nguyen Hoang Anh**, Le Thi Ngoc Thuy, Dang Thao Yen Linh. Technical process for production and treatment of pineapple juice by using enzyme, 2019. Vietnam National University of Agriculture

3) **Nguyen Hoang Anh**, Nguyen Hoang Lan, Pham Thi Diu, Dinh Mai Thuy Linh, Pham Van Cuong. Technological process of crude rice bran oil extraction, 2021. Vietnam National University of Agriculture

##### **\* Technical advances**

1) Tran Thi Minh Hang, Nguyen Thi Ai Nghia, Nguyen Thi Minh, Nguyen Thu Ha, Dinh Mai Thuy Linh, **Nguyen Hoang Anh**, Pham Van Cuong, 2021. The Technical advance of using organic materials and organic fertilizers for the production of some organic vegetables in the Northern provinces of Vietnam. TBKT 01-105:2021/BVTV

#### **Books**

- Ngo Xuan Manh, **Nguyen Hoang Anh**, Nguyen Thị Lam Đoàn, Nguyen Van Lam (2013). Food Biotechnology, Agricultural University Press

Hanoi, 1/8/2021



Hoang Anh NGUYEN