

I. Personal Detail

Doan Duc NGUYEN, PhD

A/Professor in Food Science and Technology

Vietnam National University of Agriculture

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II. Qualifications

▪ 2011-2015

Doctor of Philosophy in Food Science and Technology. Curtin University, Australia

- PhD thesis title: Effect of yoghurt processing on beta-casomorphin 5 and beta-casomorphin 7 concentrations using novel liquid chromatography-mass spectrometry methods

▪ 2003-2005

Master of Science in Food Science and Technology, Ghent University, Belgium

- Thesis title: Effect of calcium on coalescence stability of caseinate-stabilised emulsions

▪ 1994-1998

Bachelor of Engineering in Agricultural Products Processing and Storage, Vietnam National University of Agriculture, Vietnam

- Thesis title: Investigation of cow milk compositions in Northern provinces, Vietnam

III. Awards

- 2019 VNUA Science and Technology Awards: high quality peer-reviewed papers.
- 2018 VNUA Science and Technology Awards: High quality peer-reviewed papers, book chapter and Grant
- 2017 VNUA Publication Awards: High quality peer-reviewed papers
- 2015 Curtin University Faculty Publication Awards: Highest IF paper in Food Science and Nutrition (Australia)
- 2013 Curtin University Faculty Publication Awards: Highest IF paper in Nutrition & Dietetics (Australia)
- 2011 Curtin University-Vietnamese Government award scholarships for PhD degree
- 2003 Flemish Interuniversity Council award scholarships for master degree (Belgian Universities)

IV. Professional Experience

- **5/2001-present**

Lecturer, Vietnam National University of Agriculture, Hanoi, Vietnam

- **7/2019-6/2020**

Adjunct Scientist, Curtin University, Australia

- **5/2019-6/2019**

Visiting Researcher, Curtin University, Australia

- **9/2018-12/2018**

Visiting Researcher, Curtin University, Australia

- **7/2015-2/2016**

Research Assistant, Curtin University, Australia

- **8-12/2013**

Research Assistant, Curtin University, Australia

- **2006-2011 and 2016-present**

A member of the technical committee for Vietnam National Institute of Standard and Quality for the development of food analytical methods.

- **1/1999-4/2001**

Laboratory Technician, Department of Quality Assurance, Vietnam-France Feed Company, Hanoi, Vietnam

- **Teaching areas**

Undergraduate students

Milk Science and Technology (Lecture in Vietnamese)

Meat Science and Technology (Lecture in Vietnamese)

Postgraduate students

Food commodities (Lecture in English, Vietnamese)

Preservation of animal-based products (Lecture in English, Vietnamese)

- **Research areas**

Evaluation of cow milk quality in Vietnam

Milk, Functional milk products, Opioid peptides

Soy milk-based products: GABA in soymilk, soy yoghurt

V. Research Projects

LAB-MOVIE - Labour Market Observatory in Vietnam Universities funded by Erasmus+ Programme of the European Union (2020-2022). **Research Leader** in AgriFood sector.

Capacity building in improving food safety on milk supply chain for Vietnam via training experts and joint research funded by Irish Aid (2021). **Co-Investigator**

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, funded by National Foundation for Science and Technology Development, Viet Nam (NAFOSTED) (2017-2020). **Principal Investigator**

Analysis of composition of milk collected from Ha Nam, Moc Chau - Son La, Don Duong – Lam Dong, Cu Chi – HCM city (Project: Improvement of health, nutrition and milk producibility of dairy cow herds in Viet Nam, funded by VietNam-Australia, 2017). **Principal Analyst**

Production of CLA from yoghurt cultures, funded by Hanoi University of Agriculture (2010). **Principal Investigator**

Improvement of the flavour of soybean yoghurt, funded by Hanoi University of Agriculture (2010). **Principal Investigator**

Application of VietGAP (Vietnamese Good Agricultural Practice) for producing safe Thieu Litchi in Luc Ngan, Bac Giang, funded Ministry of Education and Training and Bac Giang Province, Vietnam (2008-2009). **Co-investigator**

Effect of processing conditions on the quality of whey-supplemented soy milk yoghurt,

funded by Ministry of Education and Training, Vietnam (2008-2009). **Principal Investigator**

Research on technical procedure for intensive cultivation of millet (*Setaria Italica* Beauv. and *Ereusine Coracana* Gaernt.) for functional food production, funded by Ministry of Education and Training, Vietnam (2007-2008). **Co-Investigator**

Diversity of production derived from cassava and sweet potato, funded by Ministry of Education and Training, Vietnam (2006-2007). **Co-Investigator**

Production of soy milk yoghurt, funded by Hanoi University of Agriculture (2007). **Principal Investigator**

Effect of Modified Atmosphere Packaging (MAP) on the growth of bacteria and change in color of fresh pork, funded by Hanoi University of Agriculture (2006). **Principal Investigator**

VI. Publications

Book and book chapter

Duc Doan Nguyen, Francesco Buseti and Stuart Jonhson (...). LC-HRMS for simultaneous determination of beta-casomorphin 5/7 in milk. Hamana Press (Springer Nature), US.

Nguyen Duc Doan & Tran Thi Thu Hang (2020). Milk Products Technology. University of Agriculture Publisher (Published in Vietnamese)

Doan D. Nguyen, Francesco Buseti and Vicky A. Solah (2017). “Beta casomorphins in yoghurt” *Yogurt in Health and Disease Prevention* - Ed. Nagendra P. Shah. Academic Press (Elsevier). United Kingdom

Research articles

Simurabiye Jean Baptiste, Le Thi Hoang Yen, **Nguyen Duc Doan**, Trinh Dac Hoanh, Vu Duy Nhan, Shimiymana Jean Bosco, Tran Huyen Thanh, Dong Thi Hoang Anh (submitted) Optimization of *Panax notoginseng* root extract hydrolysis by *Cordyceps militaris* derived glycosidase and bioactivities of hydrolysis products. *Scientific African*

Vu Duy Nhan, Le Thi Hoang Yen, Tran Huyen Thanh, **Nguyen Duc Doan**, Nguyen Thi Huong Nhu, Trinh Dac Hoanh, Do Vinh Truong (Submitted). Selection of β -glucosidase producing *Bacillus subtilis* for Hydrolysis of Ginsenoside from *Panax Pseudoginseng*. *Vietnam Journal of Agricultural Sciences (submitted)*. (Corresponding author)

Nguyen Thi Thom, Nguyen Thi Dinh, Duong Thi Doanh, Cao Thi Thao, **Nguyen Duc Doan** (Accepted). The Effect of germination on gamma-aminobutyric acid, phytic acid and chemical composition of Hyacinth bean (*Lablab purpureus* (L.) Sweet). *Vietnam Journal of Agricultural Sciences* (Corresponding author)

Duc Doan Nguyen, Francesco Buseti, Grant Smolenski, Stuart Keith Johnson, Vicky Ann Solah (2021). Release of beta-casomorphins during in-vitro gastrointestinal digestion of reconstituted milk after heat treatment. *FWT-Food Science and Technology* 136, 110312.

Simurabiye Jean Baptiste, Thi Hoang Yen Le, Thi Kim Van Le, Duy Nhan Vu, **Duc Doan Nguyen** (2021). Anti-cancer Immunomodulatory Activities of Bioactive Compounds from *Panax* Genus. *Food Reviews International* (Corresponding author).

Nguyen Duc Doan and Do Thi Ha (2020). The effect of heat treatment of germinated soybean on gamma-aminobutyric acid, phytic acid and physicochemical properties of soymilk yoghurt *Vietnam. Journal of Agricultural Sciences* 18(5), 367-377.

Nguyen Duc Doan and Dinh Thi Tuoi (2020). The change in gamma-aminobutyric acid, phytic acid and other compositions in soybean during germination. *Vietnam Journal of Agricultural Sciences* 18(6), 445-453.

Nguyen Duc Doan and Nguyen Thị Thuy (2020). Effects of cattle genotype, lactation cycle, lactation stage and protein beta-casein phenotype on milk composition. *Vietnam Journal of Agricultural Sciences* 18(2), 123-129.

Nguyen Duc Doan and Vicky Ann Solah (2020). Effect of frozen storage on physical properties and sensory acceptability of goat milk yoghurt. *Vietnam Journal of Agricultural Sciences* 3(1), 487-494.

Duc Doan Nguyen, Vicky Ann Solah, Francesco Buseti, Grant Smolenski, Terry Cooney (2020). Application of ultra-high performance liquid chromatography coupled to high-resolution mass spectrometry (Orbitrap™) for the determination of beta-casein phenotypes in cow milk. *Food Chemistry* 307, 1-4.

Nguyen Duc Doan (2019). Evaluation of physicochemical properties and sensory attributes of yoghurt made from mixtures of goat and cow milk. *Vietnam Journal of Agricultural Sciences* 2(3), 426-433.

Trần Đắc Hoàn, Vũ Duy Nhân, Vũ Văn Dũng, Nguyễn Thị Nhân, Trần Thị Nguyệt, Nguyễn Thị Ngoan, Lê Đức Anh, Lưu Văn Chính, Vũ Thị Hà, Lê Mai Hương, Trần Hồng Hà và **Nguyễn Đức Doan** (2019). Nghiên cứu chiết tách và hoạt tính sinh học adenosine, cordycepin từ nấm *Cordyceps militaris* (Purification and biological activity of adenosine, cordycepin from fruit body of *Cordyceps militaris*. *Tạp chí hóa học Việt Nam* 57 (*Vietnam Journal of Chemistry* 57)

Duc Doan Nguyen, Vicky Ann Solah, Stuart Keith Johnson, Hoang Anh Nguyen, Thi Lam Doan Nguyen, Thi Lan Huong Tran, Thi Khuyen Mai, Francesco Buseti (2019). Identification and quantification of beta-casomorphin peptides naturally yielded in raw milk by liquid chromatography-tandem mass spectrometry. *LWT-Food Science and Technology*, 111, 465-469.

T.L.D. Nguyen, T.Y.L. Dang and **D.D. Nguyen** (2019). Factors affect to the fermented

time, alcohol content and sensory quality of passion fruit kefir product. *Journal of Agriculture and Rural Development*, 1+2, 164-170.(full-text in Vietnamese, abstract in English)

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah (2018). Degradation of β -casomorphins and identification of degradation products during yoghurt processing using liquid chromatography coupled with high resolution mass spectrometry. *Food Research International* 106, 98-104.

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah (2018). Evaluation of Commercial Sandwich Enzyme-Linked Immunosorbent Assay for the Quantification of Beta casomorphin 7 in Yoghurt Using Solid-phase Extraction Coupled to Liquid Chromatography-Tandem Mass Spectrometry as the “Gold Method. *Journal of AOAC International* 101 (2), 515-519.

D.D. Nguyen, S.K. Johnson and M. W. Clarke (2017). Identification and quantification of dityrosine in grain proteins by isotope dilution liquid chromatography-tandem mass spectrometry. *Food Analytical Methods*, 10 (10), 3321-3328.

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah (2015). Identification and quantification of native beta casomorphins in Australian milk by LC-MS/MS and LC-HRMS. *Journal of Food Composition and Analysis*, 44, 102-110.

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah (2015). Formation and degradation of beta casomorphins in dairy processing. *Critical Reviews in Food Science and Nutrition* 55(14), 1955-1967.

Nguyen, D. D., Solah, V. A., Johnson, S. K., Charrois, J. W. A., & Buseti, F. (2014). Isotope dilution liquid chromatography–tandem mass spectrometry for simultaneous identification and quantification of beta-casomorphin 5 and beta-casomorphin 7 in yoghurt. *Food Chemistry*, 146(0), 345-352.

Nguyen Duc Doan, Le Thi Ha, Bui Thi Kim Hue and Pham Thi Tham (2009). Effect of whey supplemented into soymilk on the physical properties and sensorial quality of soymilk yoghurt. *Journal of Science and Development* 7 (6), 764-771. (Full-text in Vietnamese, Abstract in English)

Pham Van Cuong, Hoang Viet Cuong, Duong Thi Thu Hang, **Nguyen Duc Doan**, Nguyen Thi Thanh Thuy, Cao Huong Giang (2009). Genetic conservation of Foxtail millet (*Setaria Italica* (L.) Beauv. and using its grain for Nutrient food production - A case of develop economical Agriculture sustainable to climate changes in mountainous regions in Vietnam. *Journal of ISSAAS* 15 (1), 9-15.

Doan N.D. & Vander Meeren P. (2008). Factors affecting the interfacial properties of surfactant absorbed layers on an oil droplet surface. *Journal of Science and Development* (special issue), 8-16.

Doan N.D. & Vander Meeren P. (2006). Effect of calcium on the coalescence stability of sodium caseinate-stabilized emulsions. *Journal of Agricultural and Technology* (4), 82-89 (Full-text in Vietnamese, Abstract in English)

Conference Articles

Pham Van Cuong, Hoang Viet Cuong, **Nguyen Duc Doan** (2009). Effect of environmental factors on biological characters and grain quality of Vietnamese foxtail millet (*Setaria italica* L.) (Abstract). *Journal of ISSAAS* 15(1), 170-230

VII. International and National Conferences

Nguyễn Đức Doan, Vicky Ann Solah, Francesco Buseti, Grant Smolenski, Terry Cooney, Nguyễn Thị Thúy. Xác định biến thể protein beta-casein và ảnh hưởng của kiểu hình protein beta-casein, phẩm giống bò, chu kỳ sữa và giai đoạn tiết sữa đến thành phần hóa học của sữa bò (Identification of beta casein variants and effect of beta-casein

phenotype, breeds, cycle lactation and stage lactation on milk composition). Vietnam National Scientific Conference on Sustainable Animal Production and Veterinary Medicine 2020.

D.D. Nguyen. Hướng tiếp cận mới cho ngành công nghiệp sữa. Hội thảo Nông nghiệp công nghệ cao-các vấn đề và giải pháp 2018 (New approach for dairy industry in Viet Nam. High-tech Agriculture in Viet Nam-Problems and Resolutions), VNUA-2018.

D.D. Nguyen. Quantification of beta casomorphins in dairy products. Nutrition, food quality and public health. Vietnam National Association of Nutrition 2017, Hanoi, Vietnam (Oral Presentation in Vietnamese)

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah. Degradation of opioid peptides and identification of degradation products during yoghurt processing using LC-HRMS. International VBFoodNet 2017 Conference, Ho Chi Minh City, Vietnam (Oral presentation)

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah. Hydrolysis of beta casomorphin 5/7 by *Lactobacillus delbrueckii* ssp. *bulgaricus* and *Streptococcus thermophilus* during yoghurt processing. ISSAAS 2016 International Congress and General Meeting, Hanoi, Vietnam. (Oral presentation)

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah. Effect of fermentation and storage on beta casomorphin 5 and beta casomorphin 7 in yoghurt. The 2nd International Dairy Federal Symposium on Microstructure of Dairy Products and 5th International Dairy Federal Symposium on Science and Technology of Fermented Milk, March 2014, in Melbourne, Australia. (Poster presentation)

D.D. Nguyen, F. Buseti, S. Johnson and V. Solah. Quantification of beta casomorphin 5 and beta casomorphin 7 using SPE-LC-MS/MS. Mark Lewis conference 2013, Curtin

University, Australia (3-minute oral presentation and poster)

D.D. Nguyen and V.C. Pham. Compositions in millet in North-West Provinces, Vietnam. The 2nd international workshop on science and technology for sustainable development in Great Sub-Mekong region, September 2008, Hanoi, Vietnam (Oral presentation)

VIII. Patents

- Vu Duy Nhan, Le Thi Hoang Yen, Trinh Duc Hoanh, **Nguyen Duc Doan** (Under review). The fermentation process of Radix Notoginseng (North Radix Notoginseng) increases the content of ginseng active ingredient Rgr by Bacillus subtilis bacteria. *Intellectual property office of Vietnam*

IX. Journal Reviewer

- Trend in Food Science and Technology
- Journal of Dairy Research
- Journal of Food science and Nutrition Technology
- Vietnam Journal of Agricultural Sciences

X. Principal Supervisor

Nguyen Thi Thom (ongoing)

Thesis title: “Effect of processing conditions on gamma-aminobutyric acid, phytic acid and the quality of yoghurt made from germinated *Lablab purpureus* (L.) Sweet”.

MSc SIMURABIYE Jean Baptiste (supervised in English): completed 2020

Thesis title: “Study on metabolites of Panax Notoginseng by medicinal mushrooms and their antioxidant and anticancer activities”.

MSc NGUYEN Xuan Hung (supervised in Vietnamese): Completed in 2019

Thesis title: “Nghiên cứu ảnh hưởng của một số yếu tố công nghệ đến chất lượng của sữa chua đậu tương nảy mầm (Effect of process conditions on soymilk yoghurt prepared from germinated soybean)”.

MSc MAI Thi Khuyen (supervised in English): Completed in 2018

Thesis title: “Identification and quantification of beta-casomorphins in cow milk derived from different cow breeds in Vietnam”.

MSc PHAM Thi Hoa (supervised in English): Completed in 2018

Thesis title: “The current status of microbial contamination in raw pork collected from some slaughterhouses and markets located in Vinh city, Nghe an province”