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### Education

D.Sc. (Microbiology & Genetic Engineering), University of Helsinki

วท.ม.(วิทยาศาสตร์การอาหาร) มหาวิทยาลัยเกษตรศาสตร์

วท.บ.(เคมี) มหาวิทยาลัยขอนแก่น

### Expertise

Microbial genetics : lactic acid bacteria, Bacillus sp. Antimicrobial substances, probiotics

Microbial enzymatic system: hydolytic enzymes, prebiotics

### Selected Works

1. Nhung Thanh Nguyen, Massalin Nakphaichit and Sunee Nitisinprasert. 2020. Purification and Characterization of A Novel Bacteriocin Against Vancomycin Resistant Enterococci Produced by Enterococcus Hirae HM02-04. Applied Science and Engibeering Progress. 14, 259-270.
2. Amornthep Kingkaw, Massalin Nakphaichit, Narissara Suratannon, Sunee Nitisinprasert, Chantha Wongoutong, Pantipa Chatchatee, Sucheewin Krobthong, Sawanya Charoenlappanit, Sittiruk Roytrakul and Wanwipa Vongsangnak. 2020. Analysis of the infant gut microbiome reveals metabolic functional roles associated with healthy infants and infants with atopic dermatitis using metaproteomics. PeerJ. Open access. Sep 25;8:e9988.doi: 10.7717/peerj.9988.
3. Sobanbua, S., Tangthong, J., Suveatwatanakul, A., Nakphaichit, M., Keawsompong, S. and Nitisinprasert, S. 2020. Cloning and expression of the antimicrobial peptide from Lactobacillus reuteri KUB-AC5 and its characterization. International Journal of Agriculture and Technology. 16, 1013-1036.
4. Atchareeya Nakkarach, Hooi Ling Foo, Adelene Ai-Lian Song, Sunee Nitisinprasert, Ulaiwan Withayagiat. 2020. Promising discovery of beneficial Escherichia coli in the human gut. 3 Biotech. 10, 296-319.
5. Sa-ngapong Plupjeen, Wireeya Chavjiraphan, Suvimol Charoensiddhi, Sunee Nitisinprasert, Massalin Nakphaichit. 2020. Lactococcus lactis KA-FF 1-4 reduces vancomycin-resistant enterococci and impacts the human gut microbiome.. 3Biotech. 10, 295-305.
6. Orawan La-ongkham, Massalin Nakphaichit, Jiro Nakayam, Suttipun Keawsompong, Sunee Nitisinprasert. 2020. Age-related changes in the gut microbiota and the core gut microbiome of healthy Thai humans. 3 Biotech. 10, 276-289.

7. S. Sobanbua, S. Dolkittikul, M. Nakphaichit, S. Keawsompong, and S. Nitisinprasert. 2020. Antimicrobial peptide presenting potential strain-specific real time polymerase chain reaction assay for detecting the probiotic *Lactobacillus reuteri* KUB-AC5 in chicken intestine. *Poultry Science*. 99:526–535
8. Nipat Sritrakul, Sunee Nitisinprasert and Suttipun Keawsompong. 2020. Copra meal hydrolysis by the recombinant  $\beta$ -mannanase KMAN-3 and MAN 6.7 expressed in *Escherichia coli*. *3Biotech*. Published on line 11 January 2020.
9. Chanettee Jamyuang, Phanphen Phoonlapdacha, Nalinee Chongviriyaphan, Wasaporn Chanput, Sunee Nitisinprasert and Massalin Nakphaichit. 2019. Characterization and probiotic properties of *Lactobacilli* from human breast milk. *3 Biotech*. 9:398.
10. Theeraphol Jatuponwiphat, Thanawat Namrak, Ananporn Supataragul, Sunee Nitisinprasert, Massalin Nakphaichit, Wanwipa Vongsangnak. 2019 Comparative genome analysis reveals metabolic traits associated with probiotics properties in *Lactobacillus reuteri* KUB-AC5. *Gene Reports*. 17, 1-9.
11. Phatcharin Prayoonthien, Robert A. Rastall, Sofia Kolida, Sunee Nitisinprasert and Suttipun Keawsompong. 2019. In vitro fermentation of copra meal hydrolysate by human fecal microbiota. *3 Biotech*. 9:93-103.
12. Massalin Nakphaichit, Siriphan Sobanbua, Wanwipa Vongsangnak, Jiro Nakayama, Sunee Nitisinprasert. 2019. Protection effect of *Lactobacillus reuteri* KUB-AC5 through chicken microbiota with *Salmonella* *Enteritidis* challenged. *Beneficial Microbes*. 10, 43-54.
13. Witida Sathitkowitchai, Sunee Nitisinprasert, Suttipun Keawsompong. 2018 Improving palm kernel cake nutrition using enzymatic hydrolysis optimized by Taguchi method. *3 Biotech*. 8:407-4014.
14. Juma Kisuse, Orawan La-ongkham, Massalin Nakphaichit, Phatthanaphong Therdtatha, Rie Momoda, Masaru Tanaka, Shinji Fukuda, Siam Popluechai, Kongkiat Kespechara, Kenji Sonomoto, Yuan-Kun Lee, Sunee Nitisinprasert and Jiro Nakayama. 2018. Urban Diets Linked to Gut Microbiome and Metabolome Alterations in Children: A Comparative Cross-Sectional Study in Thailand. *Frontiers in Microbiology*. 22. 1-16.
15. Phatcharin Prayoonthien, Sunee Nitisinprasert and Suttipun Keawsompong. 2018. In vitro fermentation of copra meal hydrolysate by chicken microbiota. *3 Biotech*. 8, 40-51.
16. Kwankanit Intaratrakul, Sunee Nitisinprasert, Thu-Ha Nguyen, Dietmar Haltrich, Suttipun Keawsompong, 2017. Secretory expression of  $\beta$ -mannanase from *Bacillus circulans* NT 6.7 in *Lactobacillus plantarum*. Protein expression and purification. 139, 29-35.
17. Warintorn Eaksuree, Akkharadet Prachayakitti, Rutjawate Taharnklaew, Dietmar Haltrich, Sunee Nitisinprasert and Suttipun Keawsompong. 2016. Keratinase Fermentation by *Bacillus licheniformis* KUB-K0006. *VRU Research and Development Journal Science and Technology*. 2, 73-84.
18. Warintorn Eaksuree, Akkharadet Prachayakitti, Tewa Upathanpreecha, Rutjawate Taharnklaew, Sunee Nitisinprasert and Suttipun Keawsompong. 2016. In vitro and in vivo evaluation of protein quality of enzymatic treated feather meals. *SpringerPlus*. 5, 971-1976.

19. Supatjaree Ruengsomwong, Orawan La-ongkham, Jiahui Jiang, Bhusita Wannissorn, Jiro Nakayama and Sunee Nitisinprasert. 2016. Microbial community of healthy Thai vegetarians and non-vegetarians, their core gut microbiota and pathogens risk. *Journal of Microbiology and Biotechnology*. 26, 1723-1735.
20. Kittaporn Rumjuankiat, Suttipun Keawsompong, and Sunee Nitisinprasert. 2016. Bacterial Contaminants from Frozen Puff Pastry Production Process and Their Growth Inhibition by Antimicrobial Substances from Lactic Acid Bacteria . *Food Science & Nutrition*. DOI: 10.1002/fsn3.413. P. 1-13.
21. Phatthanaphong Therdtatha, • Chanabhorn Tandumrongpong, Komkhae Pilasombut, Hiromi Matsusaki, Suttipun Keawsompong and Sunee Nitisinprasert. 2016. Characterization of antimicrobial substance from *Lactobacillus salivarius* KL-D4 and its application as biopreservative for creamy filling. *Springer Plus*. 5, 1060-1081.
22. Nawapan Pongsapipatana, Piyanat Damrongteerapap, Sudathip Chantorn, Wilawan Sintuprapa, Suttipun Keawsompong and Sunee Nitisinprasert. 2016. Molecular cloning of kman coding for mannanase from *Klebsiella oxytoca* KUB-CW2-3 and its hybrid mannanase characters. *Enzyme and Microbial Technology*. 89, 39-51.
23. Phanwipa Pangsri, Yotthachai Piwpankaew, Arunee Ingkakul, Sunee Nitisinprasert and Suttipun Keawsompong. 2015 Characterization of mannanases from *Bacillus circulans* NT 6.7 and its application in mannooligosaccharides preparation as prebiotic. *Springer Plus*. 4, 771-782. DOI 10.1186/s40064-015-1565-7.
24. Komsan Phongphakdee and Sunee Nitisinprasert. 2015. Combination inhibition activity of nisin and ethanol on the growth inhibition of pathogenic Gram negative bacteria and their application as disinfectant solution. *Journal of Food Science*. 80, 2241-2246.
25. Kittaporn Rumjuankiat, Rodney Horanda Perez, Komkhae Pilasombut, Suttipun Keawsompong, Takeshi Zendo, Kenji Sonomoto and Sunee Nitisinprasert. 2015. Purification and characterization of a novel plantaricin, KL-1Y, from *Lactobacillus plantarum* KL-1. *World Journal of Microbiology and Biotechnology*. 31, 983–994.
26. Jiro Nakayama, Koichi Watanabe, Jiahui Jiang<sup>1</sup>, Kazunori Matsuda, Shiou-Huei Chao, Pri Haryono, Orawan La-ongkham, Martinus-Agus Sarwoko, I. Nengah Sujaya, Liang Zhao, Kang-Ting Chen, Yen-Po Chen, Hsueh-Hui Chiu, Tomoko Hidaka, Ning- Xin Huang, Chikako Kiyohara, Takashi Kurakawa, Naoshige Sakamoto, Kenji Sonomoto, Kousuke Tashiro, Hirokazu Tsuji, Ming-Ju Chen, Vichai Leelavatcharamas, Chii-Cherng Liao, Sunee Nitisinprasert, Endang S. Rahayu, Fa-Zheng Ren, Ying-Chieh Tsai & Yuan-Kun Lee. 2015. Diversity in gut bacterial community of school-age children in Asia. *SCIENTIFIC REPORTS*. 5 : 8397. DOI: 10.1038/srep08397. P. 1-11.
27. Orawan La-ongkham, Massalin Nakphaichit, Vichai Leelavatcharamas, Suttipun Keawsompong and Sunee Nitisinprasert. 2015. Distinct gut microbiota of healthy children from two different geographic regions of Thailand. *Archives of Microbiology*. Published on line: 03 February 2015. 197, 561-573.

28. Yotthachai Piwpankaew, Supa Sakulsirirat, Sunee Nitisinprasert, Thu-Ha Nguyen, Dietmar Haltrich and Suttipun Keawsompong. 2014. Cloning, secretory expression and characterization of recombinant  $\beta$ -mannanase from *Bacillus circulans* NT 6.7. SpringerPlus. 3, 430-438.
29. Massalin Nakphaichit, Chirapiphat Phraephaisarn, Suttipun Keawsompong, Orapin Sukpiriyagul and Sunee Nitisinprasert. 2014. Effect of Increasing Dietary Protein from Soybean Meal on Intestinal Microbiota and Their Fatty Acids Production in Broiler Chicken. *Advances in Animal and Veterinary Sciences* 2, 337 – 343.
30. Supatjaree Ruengsomwong, Yuki Korenori, Naoshige Sakamoto, Bhusita Wannissorn, Jiro Nakayama and Sunee Nitisinprasert. 2014. Senior Thai fecal microbiota comparison between vegetarians and non-vegetarians using PCR-DGGE and real-time PCR. *Journal of Microbiology and Biotechnology*. 24, 1026-1033.
31. Papassara Sangtanoo, Kiattawee Choowongkomon, Wunrada Surat, Sunee Nitisinprasert and Anchane Kubera. 2014. Antimicrobial peptides of *Lactobacillus salivarius* K4 isolated from chicken intestine. *Science Asia*. 40, 135-140.
32. Rodklongtan, O. La-ongkham, S. Nitisinprasert and P. Chitprasert. 2014 Enhancement of *Lactobacillus reuteri* KUB-AC5 survival in broiler gastrointestinal tract by microencapsulation with alginate-chitosan semi-interpenetrating polymer networks. *Journal of Applied Microbiology*. 117, 227-238.
33. Sudathip Titapoka Chantorn, Nawapan Pongsapipatana, Suttipan Keawsompong, Arunee Ingkakul, Dietmar Haltrich and Sunee Nitisinprasert. 2013. Characterization of mannanase S1 from *Klebsiella oxytoca* KUB-CW2-3 and its application in copra mannan hydrolysis. *ScienceAsia*. 39, 236-248.
34. Sudathip Titapoka Chantorn, Katesarin Buengsrissawat, Apinya Pokaseam, Tasanee Sombat, Pichamon Dangpram, Kla Jantawon and Sunee Nitisinprasert. 2013. Optimization of extracellular mannanase production from *Penicillium oxalicum* KUB-SN2-1 and application for hydrolysis property. *Sonklanakarin J. Sci. Technol.* 35, 17-22.
35. สุดาทิพย์ จันทรร กุลวดี พิศลยบุตร รินลดา รัตน์พรณทอง และ สุณีย์ นิธิสินประเสริฐ 2556. การผลิตโอลิโกแซคคาไรด์จากวัสดุเหลือทิ้งทางการเกษตรด้วยสารละลายเอนไซม์สกัดขยายจาก *Penicillium oxalicum* KUB-SN2-1 วารสารวิทยาศาสตร์และเทคโนโลยี 21(2) 104-112.
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37. Nattawadee Jantasila, Suttipun Kaewsompong, Keith Filer and Sunee Nitisinprasert. 2012. Pretreatment of agricultural wastes for the production of cellulolytic enzymes from *Aspergillus niger* 386017M1 by solid state fermentation. *Kasetsart J. (Nat. Sci.)*. *Kasetsart J. (Nat. Sci.)*. 46, 783-794.
38. Panward Prommadee, Wunwiboon Garnjanagoonchorn, Kees de Lange and Sunee Nitisinprasert. 2012. Characterization of *Lactobacillus johnsonii* KUNN19-2 and *Pediococcus pentosaceus* KUNNE6-1 isolated from Thai-style fermented pork (Nham) for their probiotic properties in the gastrointestinal tract and immunomodulation. *Kasetsart J. (Nat.Sci.)* 46, 440-450.

39. Wanthicha Lapsiri, Sunee Nitisinprasert and Penkhae Wanchaitanawong. 2011. *Lactobacillus plantarum* from fermented vegetables as potential prebiotics. *Kasetsart J. (Nat. Sci.)* 45, 1071-1082.
40. Nakphaichit, M., Thanomwongwattana, S., Phraephaisarn, C., Sakamoto, N., Keawsompong, S., Nakayama, J. and Nitisinprasert, S. 2011. The effect of including *Lactobacillus reuteri* KUB-AC5 during posthatch feeding on the growth and ileum microbiota of broiler chickens. *Poultry Science*. 90, 2753-2765.
41. Orwan La-ongkhum, Nuntaporn Pungsungvorn, Natchanok Amornthewaphat and Sunee Nitisinprasert. 2011. Effect of the antibiotic avilamycin on the structure of the microbial community in the jejunal intestinal tract of broiler chicken. *Poultry Science*. 90, 1532-1538.
42. Jakkapan Pratumteep, Jirakarn Sansernsuk, Sunee Nitisinprasert and Jirawan Apiraksakorn. 2010. Production, characterization and hydrolysis products of xylanase from *Bacillus subtilis* GN156. *KKU Res. J.* 5, 343-348.
43. Thomas Maischberger, Elisabeth Leitner, Sunee Nitisinprasert, Onladda Juajun, Montarop Yamabhai, Thu-Ha Nguyen Dr. and Dietmar Haltrich. 2010.  $\beta$ -Galactosidase from *Lactobacillus pentosus*: Purification, characterization and formation of galacto-oligosaccharides. *Biotechnology Journal*. 5, 838-847.
44. Kingkan Wongsuttichote and Sunee Nitisinprasert. 2009. Identification of antimicrobial substance producing lactic acid bacteria isolate KUB-KJ174 and its application as a biopreservative substance for bakery products. *Kasetsart J. (Nat. Sci.)*. 43, 796-807
45. Tomomi Hata, Melaku Alemu, Miho Kobayashi, Chise Suzuki, Sunee Nitisinprasert and Sadahiro Ohmomo. 2009. Characterization of a bacteriocin produced by *Enterococcus faecalis* N1-33 and its application as a food preservative. *Journal of Food Protection*. 72, 524-530
46. Jirawan Apiraksakorn, Sunee Nitisinprasert and Robert E. Levin. 2008. Grass degrading  $\beta$ -1,3-1,4-D-glucanases from *Bacillus subtilis* GN156: Purification and characterization of glucanase J1 and pJ2 possessing extremely acidic pI. *Applied Biochemistry and Biotechnology*. 149, 53-66.
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