

## CURRICULUM VITAE

**Name:** Phatthanaphong THERDTATHA

**Position:** Lecturer

**Affiliation:** Specialized Research in Microbiome and Metabolome for Health Laboratory, Division of Biotechnology, School of Agro-Industry, Faculty of Agro-Industry, Chiang Mai University, Thailand

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## EDUCATION

**2021:** Doctor of Philosophy in Agricultural Science (Innovative Science and Technology for Bio-Industry), Kyushu University, Fukuoka, Japan; thesis entitled “Study on gut microbiome and metabolome of Indonesian people in relation to dietary habits and metabolic diseases”

**2016:** Master of Science in Biotechnology, Kasetsart University, Bangkok, Thailand; thesis entitled “Characterization of Antimicrobial Substance from *Lactobacillus salivarius* KL-D4 and Its Application as Biopreservative”

**2009:** Bachelor of Science in Fermentation Technology, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

## RESEARCH INTERESTS

Gut microbiome, Gut metabolome, Gut health, Probiotics, Applied microbiology

## WORK EXPERIENCES

**2021-present:** Lecturer at Division of Biotechnology, Faculty of Agro-Industry, Chiang Mai University, Thailand

**2017:** Laboratory manager at GIB-Advanced Research and Development Center, Thailand Science Park, Pathum Tani, Thailand

**2014:** Assistant researcher at Specialized Research Unit: Prebiotics and Probiotics for Health, Department of Biotechnology, Faculty of Agro-Industry, Kasetsart University, Bangkok, Thailand

**2012:** Research trainee at Laboratory of Food Biotechnology, Department of Food and Health Sciences, Faculty of Environmental and Symbiotic Sciences, Prefectural University of Kumamoto, Kumamoto, Japan

## ACADEMIC SERVICE

**2026-present:** Specialist in Safety Assessment and Characterization of Probiotics in Foods, National Center for Genetic Engineering and Biotechnology (BIOTEC), National Science and Technology Development Agency (NSTDA), Thailand

**2022-present:** Review Editor, *Frontiers in Nutrition*

## SCHOLARSHIPS

**2017-2020:** Japanese Government Scholarship (Monbukagakusho: MEXT)

**2009-2011:** National Research University scholarship (NRU), Kasetsart University, Thailand

## GRANTS

1. **Research fellow**, Fiscal 2023 Japan Student Service Organization (JASSO) Follow-up Research Fellowship (Researcher ID: 2325), budget: 990,000 Yen, topic: “Comparative research on gut microbiota between Thai and Japanese people”, **2023**.
2. **Principal investigator**, The Murata Science Foundation 2023 (Grant no. 23TC09), budget: 800,000 Yen, topic: “Investigation on whole-genome sequencing and metabolomic profile of *Lactiplantibacillus plantarum* CMUB-N14: a probiotic for metabolic syndrome Management”, **2023-2024**.
3. **Principal investigator**, CMU Junior Research Fellowship Program, Chiang Mai University, budget: 100,000 Baht, topic: “Screening and characterization of Lactobacilli probiotics from fermented foods for obesity management”, **2022-2023**.
4. **Principal investigator**, TED Youth Startup (Ideation Incentive Program), Ministry of Higher Education, Science, Research and Innovation, budget: 100,000 Baht, topic: “Innovative yogurt supplemented with synbiotics for the management of metabolic syndrome”, **2022-2023**.
5. **Principal investigator**, Young researcher grant, Faculty of Agro-Industry, Chiang Mai University, budget: 70,000 Baht, topic: “Study of resistant starch properties from cultivated banana for CMUB probiotic encapsulation in yogurt”, **2022-2023**.
6. **Principal investigator**, TED Youth Startup (Proof of Concept), Ministry of Higher Education, Science, Research and Innovation, budget: 1,500,000 Baht, topic: “Sangravee Synbiotics Shot: Innovative synbiotic for metabolic syndrome”, **2024-2025**.
7. **Principal investigator**, Tech to Commercial Shift Platform (P4), Northern Science Park (NSP), budget: 100,000 Baht, topic: “Thai-Strain Synbiotic Capsules for Metabolic Syndrome Management”, **2026**.
8. **Principal investigator**, FIncubator#3, Food Innopolis at Kasetsart University, budget: 100,000 Baht, topic: “BioMe D Due Probiotic Shot”, **2026**.
9. **Principal investigator**, Chief Technical Officers Plug-in (P5), Chiang Mai University Science and Technology Park (STeP), budget: 100,000 Baht, topic: “Development of Biome D Duo Probiotic Shot: An innovative Thai-duo probiotics to strengthen the immune barrier.”, **2026**.

## PUBLICATIONS

1. Wisetkiao S, Khang LTP, Phetduang K, Dwinanti SH, **Therdtatha P**, Lee PT, Sangsawad P, Seel-audom M, Permpoonpattana P, Jung WK, Linh NV. **2026**. Dietary caffeic acid mitigates *Streptococcus agalactiae* pathogenesis in Asian seabass (*Lates calcarifer*): antibacterial efficacy, immunomodulatory gene regulation, and hepatoprotection. *Microb. Pathog.* 108582.
2. Permpoonpattana P, Chakma A, Mwamburi SM, Khang LTP, Sihamok W, Phetduang K, **Therdtatha P**, Islam SI, Amin N, Shahed K, Sangsawad P, Linh NV. **2026**. Phenotypic and whole-genome characterization of a novel *Lysinibacillus fusiformis* PWR01 isolated from rubber latex with multifunctional probiotic and antimicrobial potential. *Microb. Pathog.* 108546.
3. Permpoonpattana P, Islam SI, Khang LTP, Dangasawat O, Sangsawad P, Yeh SD, Phetduang K, **Therdtatha P**, Onsanit S, Linh NV. **2026**. Comprehensive characterization

- and genome-resolved insights into the probiotic potential of *Bacillus* sp. KNSH39 isolated from *Litopenaeus vannamei* intestine. *World J Microbiol Biotechnol.* 42: 238.
4. **Therdtatha P**, Buakhao T, Kullawong N, Jinatham V, Vichasilp T, Nakayama J, Popluechai S. **2026**. Associations among diet, gut microbiota, and hypertension: a cross-sectional study in Thai subjects. *PeerJ.* 14: e21135.
  5. Linh NV, Khang LTP, Wisetkao S, Dinh-Hung N, Sangsawat P, Sihamok W, Dangawat O, Phetduang K, **Therdtatha P**, Seel-audom M, Permpoonpattana P. **2026**. Dietary Encapsulation of a Novel *Lysinibacillus* sp. PWR01 Probiotic Modulates Growth, Antioxidant, Immune Gene Expression, and Gut Health in Nile tilapia (*Oreochromis niloticus*) Against *Aeromonas hydrophila* Infection. *Antioxidants.* 15(3): 373.
  6. Appamano W, Dangawat O, Onsanit S, Sowanpreecha R, **Therdtatha P**, Tran HTQ, Ho TH, Tang Phuc Khang L, Sangsawat P, Dinh-Hung N, Nghia PDT, Won-Kyo J, Linh NV, Permpoonpattana P. **2025**. Co-encapsulated probiotic *Bacillus aryabhatai* CKNJH11 with algae-derived polysaccharides on growth performance and immunity in Asian seabass (*Lates calcarifer*). *Int. J. Microbiol.* 8862338: 17.
  7. Tang Phuc Khang L, Linh NV, Wisetkao S, **Therdtatha P**, Dinh-Hung N, Phimolsiripol Y, Seesuriyachan P, Sangsawat P, Permpoonpatana P. Van Doan H. **2025**. Fermented corn stover (*Zea mays* L.) enhances growth, immune response, histology, gut microbiome, and gene expression in *Cyprinus carpio* var. koi in biofloc system. *Ital. J. Anim. Sci.* 24(1): 2359-2375.
  8. Seetaraso T, Grunec L, Jinatham V, Kantakat S, Albert ML, **Therdtatha P**, Inta A, Srikumool M, Kampuansai J, Popluechai S. **2025**. Effects of ethnicity and geography on the fecal microbiota and dietary habits of Tibeto-Burman hill tribes in Northern Thailand. *PLOS ONE.* 20(10): e0332108.
  9. **Therdtatha P**, Grunec L, Nachalam P, Jinatham V, Saninjuk K, Nakayama J, Popluechai S. **2025**. Gut microbiome and fecal metabolite profiles in obese school-aged children from Northern Thailand. *Front. Microbiol.* 16: 1657839.
  10. Chaiwong N, Gavahian M, Trititanakiat PC, **Therdtatha P**, Moukamnerd C, Leksawasdi N, Phimolsiripol Y. **2025**. Ultrasound-accelerated maillard reaction to improve functional and antioxidant properties of hemp protein-carboxymethyl chitosan conjugates as a future food ingredient. *Innov. Food Sci. Emerg. Technol.* 104: 104118.
  11. Linh NV, Khang LTP, Dinh-Hung N, Wisetkao S, **Therdtatha P**, Sangsawat P, Wannavijit S, Jitjumnong J, Permpoonpattana P, Van Doan H. **2025**. Effects of dietary corn silk (*Zea mays* L.) on growth, immune and antioxidant pathways, histological morphology, gut microbiome, and sensitivity to acute ammonia exposure in the koi carp (*Cyprinus carpio* var. koi). *Comp Biochem Physiol B Biochem Mol Biol.* 279: 111127.
  12. Tangjaidee P, Braspaiboon S, Singhadechachai N, Phongthai S, **Therdtatha P**, Rachtanapun P, Sommano SR, Seesuriyachan P. **2025**. Enhanced bioactive coffee cherry: infusion of submerged-fermented green coffee beans via vacuum impregnation. *Foods.* 14(7): 1165.
  13. Chomphoosee T, Seesuriyachan P, Wattanutchariya W, Tipbunjong C, **Therdtatha P**, Techapun C, Insomphun C, Panti N, Moukamnerd C. **2025**. A novel beverage of coffee cherry (cascara) water kefir rich in antioxidants, bioactive compounds, and exhibiting promising antibacterial and sensory qualities. *LWT.* 229: 117539.
  14. Mwamburi SM, Islam SI, Dinh-Hung N, Dangawat O, Sowanpreecha R, Khang LTP, Montha N, **Therdtatha P**, Dwinanti SH, Permpoonpattana P, et al. **2024**. Genomic

- characterization of *Bacillus* sp. THPS1: a hot spring-derived species with functional features and biotechnological potential. *Microorganisms*. 12(12): 2476.
15. Panti N, **Therdtatha P**, Dountga S, Saenkam S, Seesuriyachan P, Rachtanapun P, Sawangrat K. **2024**. Microbiological and biochemical characterization, and sensory evaluation of dragon blood tea kombucha. *Chiang Mai J. Sci.* 51(6): e2024088.
  16. Sawangrat K, **Therdtatha P**, Pundee A, Seesuriyachan P, Panti N. **2024**. Development of new functional beverage: longan kefir supplemented with herbs. *Curr. Appl. Sci. Technol.* 24(6): e0259608.
  17. Rahayu SE, Yoga WK, Komalasari H, Mariyatun M, Yuda WA, Manurung NEP, Hasan PN, Suharman S, Pamungkaningtyas FH, Nurfiana DA, Pramesi PC, Gatya M, **Therdtatha P**, Nakayama J, Juffrie M, Djaafar TF, Marwati T, Utami T. **2024**. Probiotic chocolate containing *Lactobacillus plantarum* Dad-13 alters the gut microbiota composition of undernourished children in lombok: a randomized double-blind trial. *Int. J. Food Sci.* 2024: 1-13.
  18. Shinoda A, Lkhagvajav T, Mishima R, **Therdtatha P**, Jamiyan D, Purevdorj C, Sonomtseren S, Chimiddorj B, Namdag B, Lee YK, Shirchin D, Nakayama J. **2024**. Gut microbiome signatures associated with type 2 diabetes in obesity in Mongolia. *Front. Microbiol.* 15.
  19. **Therdtatha P**, La-ongkham O, Nakphaichit M, Mapato C, Rungruang S, Nakayama J, Nitisinprasert S. **2024**. Effect of lactic acid bacterial starter KUB-G2 on grass silage quality and its microbial community performed using 140-ton plastic bag silos. *QUAL ASSUR SAF CROP.* 15(SP1): 1-13.
  20. Thikham S, Jeenpitak T, Shoji K, Phongthai S, **Therdtatha P**, Yawootti A, Klangpetch W. **2024**. Pulsed electric field-assisted extraction of mushroom  $\beta$ -glucan from *Pleurotus pulmonarius* by-product and study of prebiotic properties. *Int J Food Sci Technol.* 59: 3939–3949.
  21. Thikham S, Tongdonyod S, Kantala C, **Therdtatha P**, Klangpetch W. **2024**. Enhancing enzymatic production efficiency of crude pectic oligosaccharides by pulsed electric field and study of prebiotic potential. *J Food Sci Technol.* 61(2): 320-330.
  22. **Therdtatha P**, Jareontanahun N, Chaisuwan W, Yakul K, Paemane A, Manassa A, Moukamnerd C, Phimolsiripol Y, Sommano SR, Seesuriyachan P. **2023**. Production of functional Arabica and Robusta green coffee beans: optimization of fermentation with microbial cocktails to improve antioxidant activity and metabolomic profiles. *Biocatal. Agric. Biotechnol.* 53: 102869.
  23. Naklong K, **Therdtatha P**, Sumonsiri N, Leksawasdi N, Techapun C, Rachtanapun P, Taesuwan S, Nunta R, Khemacheewakul J. **2023**. Microencapsulation of *Bifidobacterium breve* to enhance microbial cell viability in green soybean yogurt. *Fermentation.* 9(3):296.
  24. Grunec L, Jinatham V, **Therdtatha P**, Popleuchai S. **2022**. Siamese fighting fish (*Betta splendens Regan*) gut microbiota associated with age and gender. *Fishes.* 7(6): 347.
  25. **Therdtatha P**, Shinoda A, Nakayama J. **2022**. Crisis of the Asian gut: associations among diet, microbiota, and metabolic diseases. *BMFH.* 2021-085.
  26. Watanabe M, Sianoya A, Mishima R, **Therdtatha P**, Rodriguez A, Ramos DC, Lee YK, Dalmacio LM, Nakayama J. **2021**. Gut microbiome status of urban and rural Filipino adults in relation to diet and metabolic disorders. *FEMS Microbiol Lett.* 368(20): 149.

27. Shinoda A, Shirchin D, Jamiyan D, Lkhagvajav T, Purevdorj C, Sonomtseren S, Chimiddorj B, Namdag B, **Therdtatha P**, Nakayama J. **2021**. Comparative study of gut microbiota mongolian and Asian people. *Mong. J. Agric. Sci.* 33.
28. **Therdtatha P**, Song Y, Tanaka M, Mariyatun M, Almunifah M, Manurung NEP, Indriarsih S, Lu Y, Nagata K, Fukami K, Ikeda T, Lee YK, Rahayu ES, Nakayama J. **2021**. Gut Microbiome of Indonesian Adults Associated with Obesity and Type 2 Diabetes: A Cross-Sectional Study in an Asian City, Yogyakarta. *Microorganisms*. 9(5): 897.
29. Rahayu ES, Mariyatun M, Putri Manurung NE, Hasan PN, **Therdtatha P**, Mishima R, Komalasari H, Mahfuzah NA, Pamungkaningtyas FH, Yoga WK, Nurfiana DA, Liwan SY, Juffrie M, Nugroho AE, Utami T. **2021**. Effect of probiotic *Lactobacillus plantarum* Dad-13 powder consumption on the gut microbiota and intestinal health of overweight adults. *World J Gastroenterol*. 27(1): 107-128.
30. Kisuse J, La-Ongkham O, Nakphaichit M, **Therdtatha P**, Momoda R, Tanaka M, Fukuda S, Popluechai S, Kespechara K, Sonomoto K, Lee YK, Nitisinprasert S, Nakayama J. **2018**. Urban diets linked to gut microbiome and metabolome alterations in children: a comparative cross-sectional study in Thailand. *Front Microbiol*. 9: 1345.
31. **Therdtatha P**, Tandumrongpong C, Pilasombut K, Matsusaki H, Keawsompong S, Nitisinprasert S. **2016**. Characterization of antimicrobial substance from *Lactobacillus salivarius* KL-D4 and its application as biopreservative for creamy filling. *Springerplus*. 5(1): 1060.