



Curriculum Vitae

Institute of Nutrition, Mahidol University (INMU)

999 Phutthamonthon 4 Rd., Salaya, Phutthamonthon

NAME: Chalat Santivarangkna

PROFILE

Food biotechnologist with practical experiences with food industries and researches on probiotic, prebiotic, nutrition and functional foods. Able to work either independently or within a cross-functional and multi-cultural team. Proven interpersonal, communicative, and organizing skills. Comfortable in dealing with a challenging problem. Naturally taking a systematic approach and lateral thinking to problem solving.

E-MAIL ADDRESS: chalat.san@mahidol.ac.th

CURRENT POSITIONS

- Director, Institute of Nutrition, Mahidol University, Thailand (ca.124 staffs, 36 PhD faculty members)
- Lecturer

EDUCATION

Dr.rer.nat. Food Biotechnology	Technical University Munich	Germany
MSc. Biotechnology	Kasetsart University Thailand	Thailand
BSc. Agricultural Industry	King Mongkut's Institute of Technology Ladkrabang	Thailand

OTHER PROFESSIONAL ACTIVITIES

- Expert reviewer: Thai-FDA, Thailand Research Fund, National Research Council, Agricultural Research Development Agency (ARDA),
- Member: Subcommittee of Thai-FDA: Analysis and Judgement on Food Issues, Nutrition/Health Claims, Working group for drafting/revising the Notifications of the Ministry of Health on Health Claims and on Probiotics; Subcommittee on the Revision of Iodine Fortification in Salt and Food Products-The National Committee on Iodine Deficiency Disorders
- Edited Healthy Cooking with Oats Vol. 1&3 (published together with 4 ASEAN Nutrition Societies/Foundation)
- Filing 3 patents and 3 petty patents (pending for approval)



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Research Experiences (PI, governmental funding agencies)

- Development of Functional Fermented Spider Weed using a GABA-Producing Probiotic *Lactiplantibacillus pentosus* 9D3, Mahidol University, 2025
- Development of Sterile Liquid Human Milk Fortifier for Very Low Birth Weight (VLBW) Preterm Infant and the Pilot Scale Production Thereof, Program Management Unit Competitiveness (PMUC), 2024
- RAINS for Medical & Functional Food Valley by MU, Management for development of RAINS for Medical & Functional Food Valley by Mahidol University 2023 - 2024, The Agricultural Research Development Agency (Public Organization)
- Policy Research for Thailand's Food Systems Development, The Agricultural Research Development Agency (Public Organization), 2021
- Bioactive compound database of food resources in Thailand, Administration and Capital Management Unit for Enhancing the Competitiveness of the Country (AEC), 2021
- Processing of edible insects for improved nutrition – Procinut, Bonn of University, Germany, 2018

PUBLICATIONS

■ International Level (2021-2025)

1. Kittibunchakul S., Whanmek K., Rungrat Chamchan, **Santivarangkna C.**, (2025). Sun drying and roasting mulberry silkworm pupae with salt improves dehydration efficiency, microbiological safety, fatty acid and amino acid profile, and protein digestibility and quality, Discover Food, 5 (1), 199
2. Dominguez-Bello M., Steiger D., Fankhauser M., Egli A., **Santivarangkna C.**, et al, (2025). The microbiota vault initiative: safeguarding Earth's microbial heritage for future generations, Nature Communications, 16 (1), 1-6
3. Rai S., Whanmek K., Akanitkul P., Deeaum A., Winuprasith T., Kemsawasd V., Suttisansanee U., **Santivarangkna C.**, Kittibunchakul S., (2025). Fabrication of Alginate/Chitosan Composite Beads for Improved Stability and Delivery of a Bioactive Hydrolysate From Shrimp (*Litopenaeus vannamei*) Head, Food Science & Nutrition, 13 (6), art. no. e70443



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4. Reathong N., Chamtim P., Thananusak R., Whanmek K., **Santivarangkna C.**, (2025) Genome-wide transcriptomics revealed carbon source-mediated gamma-aminobutyric acid (GABA) production in a probiotic, lactiplantibacillus pentosus 9D3. *Heliyon*, 11 (2), art. No. e41879

5. Khanashyam, AC, AS Mundanat, K Sajith Babu, **Santivarangkna C.**, et al, (2025) Emerging alternative food protein sources: production process, quality parameters, and safety point of view. *Critical Reviews in Biotechnology* 45 (1), 1-22

6 . Kemsawasd V., Karnpanit W., Thangsiri S., Wongputtisin P., Kanpiengjai A., Khanongnuch C., Suttisansanee U., **Santivarangkna C.**, Kittibunchakul S., (2024) Efficient recovery of functional biomolecules from shrimp (*Litopenaeus vannamei*) processing waste for food and health applications via a successive co-culture fermentation approach. *Current Research in Food Science* 9, 100850

7. Khemthong C., Suttisansanee U., Chaveanghong S., Chupeerach., Thangsiri S., Temviriyankul P., **Santivarangkna C.**, Chamchan R., Aursalung A., On-nom N., (2024) Physico-functional properties, structural, and nutritional characterizations of Hodgsonia heteroclite oilseed cakes. *Scientific Reports*, 14 (1), art. No. 19241

8. Khoonin, W., PC Shantavasinkul, **C Santivarangkna**, K Praengam, et al, (2023) Eicosapentaenoic acid and branched-chain amino acids fortified complete nutrition drink improved muscle strength in older individuals with inadequate protein intake. *Frontiers in Nutrition* 10, 1164469

9 . Kittibunchakul S., Whanmek K., **Santivarangkna C.**, Physicochemical, microbiological and nutritional quality of fermented cricket (*Acheta domesticus*) paste (2023) *LWT*, 189, art. No. 115444

10. Piseskul, J., Suttisansanee, U., Chupeerach, C., Khemthong, C., Thangsiri, S., Temviriyankul, P., Sahasakul, Y., **Santivarangkna, C.**, Chamchan, R., Aursalung, A., On-nom, N., (2023) Optimization of Enzyme-Assisted Mechanical Extraction Process of Hodgsonia heteroclite Oilseeds and Physical, Chemical, and Nutritional Properties of the Oils. *Foods*, 12 (2), art. no. 292.,

11 . Zakaria, NH., K Whanmek, S Thangsiri, **Santivarangkna, C.**, et al, (2023) Optimization of cold brew coffee using central composite design and its properties compared with hot brew coffee. *Foods* 12(12), 2412

12 . Khoonin, W., Shantavasinkul, P. C., **Santivarangkna, C.**, D. Trachootham, (2022) Loss of Eicosapentaenoic Acid (EPA) but Not Macro-nutrients and Branched Chain Amino Acids (BCAAs) after Retort Sterilization of the EPA-BCAA Fortified Complete Nutrition Drink 11, 2023.



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13. Rajput, M. S., **Santivarangkna, C.**, et al, (2022). “Bio-actives from Caesalpinia sappan Linn: Recent advancements in phytochemistry and pharmacology.” South African Journal of Botany. 151, 60-74.,

14. Wispen, S., Somsong, P., **Santivarangkna, C.**, Tiyayon, P., Chathiran W., Matthews, K.R., Srichamnong, W. Changes in Bioactive Compounds, Antioxidant Activities and Chemical Properties of Pickled Tea By-Product Fermentation: Promissing Waste Management and Value-Added Product (2022) Fermentation, 8 (10), art. no. 472.,

15 . Thorakkattu, P., Khanashyam, A.C., Shah, K., BABU, K.S., Mundanat, A.S., Deliepnan, A., Deokar, G.S., **Santivarangkna, C.**, Nirmal, N.P. Postbiotics: Current Trends in food and Pharmaceutical Industry (2022) Foods, 11 (19), art. no. 3094.,

16. Reathong, N., **Santivarangkna, C.**, Visessanguan, W., Santiyant, P., Mhuantong, W., Chokesajjawatee, N. Whole-genome sequence analysis for evaluating the safety and probiotic potential of Lactiplantibacillus pentosus 9D3, a gamma-aminobutyric acid (GABA)-producing strain isolated from Thai pickled weed (2022) Frontiers in Microbiology, 13, art.no. 969548.,

17. Supasil, R., **Santivarangkna, C.**, et al, (2022) “Improvement of Sourdough and Bread Qualities by Fermented Water of Asian Pears and Assam Tea Leaves with Co-Cultures of Lactiplantibacillus plantarum and Saccharomyces cerevisiae.” Foods 11.

18 . Nirmal, N.P. **Santivarangkna, C.**, Benjakul, S., Maqsood, S. Fish protein hydrolysates as a health-promoting ingredient – Recent update (2022) Nutrition Reviews, 80 (5), pp. 1013-1026.

19 . Nirmal, N.P., **Santivarangkna, C.**, Rajput, M.S., Benjakul, S., Maqsood, S. Valorization of fish by products: Sources to end-product applications of bioactive protein hydrolysate (2022) Comprehensive Reviews in Food Science and food Safety, 21 (2), pp. 1803-1842.

20. Suwapat Kittibunchakul, Nantana Yuthaworawit, Kanyawee Whanmek, Uthaiwan Suttisansanee, **Chalat Santivarangkna** (2021), Health beneficial properties of a novel plant-based probiotic drink produced by fermentation of brown rice milk with GABA-producing Lactobacillus pentosus isolated from Thai pickled weed, journal of Functional Foods. Volume 86, 104710

21 . Nirmal NP, **Santivarangkna C**, Benjakul S, Maqsood S. Fish protein hydrolysates as a health-promoting ingredient-recent update. Nutr Rev. 2021 Sep 8:nuab065

22. Trachootham D, Whanmek K, Praengam K, Temviriyankul P and **Santivarangkna C.** (2021) Intake of Lactobacillus rhamnosus GG (LGG) Fermented Milk before drinking Alcohol Reduces Acetaldehyde Levels and Duration of Flushing in Drinkers with Wild-type and Heterozygous Mutant ALDH2: A Randomized, Blinded Crossover Controlled Trial. Food & Function.doi: 10.1039/D1Fo01485D



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23 . Khuropakhonphong, R. Whanmek, K., Purtiponthanee, S., Chathiran, W., Srichamnong, S., **Santivarangkna, C.** Trachootham, D. (2021) Bulgarian yogurt relieved symptoms and distress and increased fecal short-chain fatty acids in healthy constipated women: A randomized, blinded crossover controlled trial, NFS Journal, 22, 20-31,

24 . Chupeerach, C.; Aursalung,A.; Watcharachaisoponsiri, T.; Whanmek, K.; Thiyajai, P.; Yosphan, K.; Sritalahareuthai, V.; Sahasakul, Y.; **Santivarangkna, C.;** Suttisansanee, U. (2021) The Effect of Steaming and Fermentation on Nutritive Values, Antioxidant Activities, and Inhibitory Properties of Tea Leaves. Foods, 10, 117, 2-16

25 . Nirmal N, **Santivarangkna C**, (2021) Bio-Preservation of Dairy Products: A Non-Thermal Processing and Preservation Approach for Shelf-Life Extension of dairy Products. Non-Thermal Processing Technologies for the Dairy Industry, 111-126

BOOK

1 . Nirmal N, **Santivarangkna C**, Alaa E, Francisco J.B, (2024). Fish Protein Hydrolsates: From Production to Food and Nutraceutical Industry Applications, Elsevier, 044321655x, 9780443216558

2. Nirmal, N. P. and **Santivarangkna, C.** (2021). Chapter-9- Bio preservation of dairy products: A non-thermal processing & preservation approach for shelf life extension of dairy products in Non-thermal Processing Technologies for the dairy Industry, CRC Press (Taylor & Francis Gropu, LLC).

3. **Santivarangkna, C.** Chapter 15: Storage of Probiotics, In P., Foerst and **C. Santivarangkna** (Ed.), Advances in Probiotic Technology, CRC Press, 2015, ISBN 9781498734530

4. **Santivarangkna, C.** Chapter 7: Preservation of Lactic Starters, In A. K. Puniya, Fermented Milk and Dairy Products, CRC Press, 2015

5. Foerst, P. and **Santivarangkna, C.** Chapter 17: Advances in Starter Culture Technologies, In W. H. Holzapfel(Ed.): Advances in fermented foods and beverages, Woodhead Publishing, 2014

6. **Santivarangkna, C.**, Kulozik, U. and Foerst, P, (2011) Chapter 20: Storing Lactic Acid Bacteria: Current Methodologies and Physiological Implications, In K. Papadimitriou and E. Tsakalidou (Eds.): Stress Response in Lactic Acid Bacteria, Springer Publisher, ISBN-10: 0387927700



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7. **Santivarangkna, C.** (Editor-Thai food session): Healthy Cooking with Oats Vol. 1&3 (published together with 4 ASEAN Nutrition Societies/Foundation)
8. Foerst, P. and **Santivarangkna, C.** (Book Editors) Advances in Probiotic Technologies, CRC Press, 2015, ISBN 9781498734530

LANGUAGES: ENGLISH-Fluent, GERMAN-Good, THAI-Native

INTERESTS: Football, Swimming, Cooking, and Reading