



Curriculum Vitae

Institute of Nutrition, Mahidol University (INMU)

999 Phutthamonthon 4 Rd., Salaya, Phutthamonthon

Name Suwapat Kittibunchakul

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Current position Lecturer

Education:

- 2020 Dr.nat.techn./ Ph.D. (Food Biotechnology), University of Natural Resources and Life Sciences, Vienna, Austria
2014 M.Sc. (Food Science for Nutrition), Mahidol University, Thailand
2011 B.Sc. with Honors (Biotechnology), Kasetsart University, Thailand

Research Interest and Expertise

1. Pro- and prebiotics
2. Fermentation and microbial-derived products
3. Enzymatic biotransformation
4. Bioactivities of functional food ingredients

Research Experiences

1. Screening, isolation and identification of food-associated microorganisms
2. Genomic cloning, gene expression and recombinant protein purification using bacterial expression platforms
3. Production and characterization of microbial enzymes
4. Fermentability and prebiotic potential of oligosaccharides by intestinal bacteria
5. Development of probiotic products and functional fermented foods
6. Microbial and enzymatic biotransformations of by-products/wastes
7. Investigation of nutritive values, bioactive compounds and in vitro bioactivities of food materials

Training

- 2021 ISO/IEC 17025:2017 Internal auditing, Institute of Nutrition, Mahidol University, Thailand
2020 Management of microbiology laboratory based on ISO/IEC17025:2017, Thailand Institute of Scientific and Technological Research, Thailand
2020 Biosafety guidelines for modern biotechnology, National Center for Genetic Engineering and Biotechnology, Thailand
2018 The 15th European training course on carbohydrates, Wageningen University & Research, The Netherlands
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Publications

National

Tonglim, J., **Kittibunchakul, S.**, Kriengsinyos, W., Kettawan, A. & Suttisansanee, U., Comparative study on anti-hypertension potential of Thai herbal teas and conventional teas (*Camellia sinensis*). *Agricultural Science Journal*, 2016. 46(3)(Suppl.): 13-16.

International

Kittibunchakul, S., Hudthagosol, C., Sanporkha, P., Sapwarobol, S., Suttisansanee, U. & Sahasakul, Y. Effects of maturity and thermal treatment on phenolic profiles and in vitro health-related properties of sacha inchi leaves. *Plants*, 2022, 11(11): 1515.

Temviriyankul, P., **Kittibunchakul, S.**, Trisonthi, P., Kunkeaw, T., Inthachat, W., Siriwan, D. & Suttisansanee, U. *Mangifera indica* 'Namdokmai' prevents neuronal cells from amyloid peptide toxicity and inhibits BACE-1 activities in a *Drosophila* model of Alzheimer's amyloidosis. *Pharmaceuticals*, 2022, 15(5): 591.

Kittibunchakul, S., Hudthagosol, C., Sanporkha, P., Sapwarobol, S., Temviriyankul, P. & Suttisansanee, U. Evaluation of sacha inchi (*Plukenetia volubilis* L.) by-products as valuable and sustainable sources of health benefits. *Horticulturae*, 2022, 8(4): 344.

Sirichai, P., **Kittibunchakul, S.**, Thangsiri, S., On-Nom, N., Chupeerach, C., Temviriyankul, P., Inthachat, W., Nuchuchua, O., Aursalung, A., Sahasakul, Y., Charoenkiatkul, S. & Suttisansanee, U. Impact of drying processes on phenolics and in vitro health-related activities of indigenous plants in Thailand. *Plants*, 2022, 11(3): 294.

Temviriyankul, P., **Kittibunchakul, S.**, Trisonthi, P., Inthachat, W., Siriwan, D. & Suttisansanee, U. Analysis of phytonutrients, anti-mutagenic and chemopreventive effects of tropical fruit extracts. *Foods*, 2021, 10(11): 2600.

Kittibunchakul, S., Yuthaworawit, N., Whanmek, K., Suttisansanee, U. & Santivarangkna, C. 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*, 2021, 86: 104710.

Prihandari, R., Karnpanit, W., **Kittibunchakul, S.** & Kemsawasd, V. Development of optimal digesting conditions for microplastic analysis in dried seaweed *Gracilaria fisheri*. *Foods*, 2021, 10(9): 2118.

Yogeswara, I. B. A., **Kittibunchakul, S.**, Rahayu, E. S., Domig, K. J., Haltrich, D. & Nguyen, T. H. Microbial production and enzymatic biosynthesis of γ -aminobutyric acid (GABA) using *Lactobacillus plantarum* FNCC 260 isolated from Indonesian fermented foods. *Processes*, 2021, 9(1): 22.

Kanpiengjai, A., Khanongnuch, C., Lumyong, S., Kummasook, A. & **Kittibunchakul, S.** Characterization of *Sporidiobolus ruineniae* A45.2 cultivated in tannin substrate for use as a potential multifunctional probiotic yeast in aquaculture. *Journal of Fungi*, 2020, 6(4): 378.



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Kanpiengjai, A., Khanongnuch, C., Lumyong, S., Haltrich, D., Nguyen, T. H. & **Kittibunchakul, S.**, Co-production of gallic acid and a novel cell-associated tannase by a pigment-producing yeast, *Sporidiobolus ruineniae* A45.2. *Microbial Cell Factories*, 2020, 19(1): 95.

Kittibunchakul, S., van Leeuwen S. S., Dijkhuizen, L., Haltrich, D. & Nguyen, T. H., Structural comparison of different galacto-oligosaccharide mixtures formed by β -galactosidases from lactic acid bacteria and bifidobacteria. *Journal of Agricultural and Food Chemistry*, 2020, 68(15): 4437-4446.

Pham, M. L., Tran, A. M., **Kittibunchakul, S.**, Nguyen, T. T., Mathiesen, G. & Nguyen, T. H., Immobilization of β -galactosidases on the *Lactobacillus* cell surface using the peptidoglycan-binding motif LysM. *Catalysts*, 2019, 9(5): 443.

Kittibunchakul, S., Pham, M. L., Tran, A. M. & Nguyen, T. H., β -Galactosidase from *Lactobacillus helveticus* DSM 20075: Biochemical characterization and recombinant expression for applications in dairy industry. *International Journal of Molecular Sciences*, 2019, 20(4): 947.

Kittibunchakul, S., Maischberger, T., Domig, K. J., Kneifel, W., Nguyen, H. M., Haltrich, D. & Nguyen, T. H., Fermentability of a novel galacto-oligosaccharide mixture by *Lactobacillus* spp. and *Bifidobacterium* spp.. *Molecules*, 2018, 23(12): 3352.

Kittibunchakul, S., Thiyajai, P., Suttisansanee, U. & Santivarangkna, C., Determination of GABA content in Thai brown rice by an optimized enzyme-based method. *Chiang Mai Journal of Science*, 2017, 44(1): 132-143.