



CURRICULUM VITAE

Institute of Nutrition, Mahidol University (INMU)
999 Phuttamonthon 4 Road, Salaya, Nakhon Pathom 73170 Thailand

NAME : MISS WOORAWEE INTHACHAT
EMAIL : woorawee.int@mahidol.ac.th
Current position : Researcher (Senior Professional Level)

EDUCATION

2017-2019 Master of Science (Toxicology and Nutrition for Food Safety)
Institute of Nutrition, Mahidol University, Thailand
Project : Genotoxicity Assessment of *Diplazium Esculentum* (Retz.) SW. Extract and Its Effects on Alzheimer's-Related Enzymes

2012-2017 Bachelor of Science (Food Technology)
Mahidol University, Thailand
Project : Effect of Anti-browning agents on the Quality of Vacuumed Boiled Sweet Corn.

LANGUAGES

English IELTS score overall 5.5
Speaking (score 4) Listening (score 5) Writing (score 6) Reading (score 6)

Duolingo score overall 105
Speaking (score 95) Listening (score 105) Writing (score 105) Reading (score 115)

SKILLS AND EXPERIENCE

1. Molecular biology (RNA extraction, preparation CDNA, genomic DNA extraction, RT-PCR, PCR, protein extraction from cell and animal, western blot analysis)
2. Liquid chromatography – mass spectrometry (LC-MS) in the form of single quadrupole and triple quadrupole. Gas chromatography-mass spectrometry (GC-MS) can be used to effectively analyse and explain test results under analysis.
3. Program (In silico study, docking analysis, cleaves protein structure, statistical analysis programs (SPSS, GraphPad Prism, and XL stat)
4. Phytochemical analysis
5. Optimize extract condition using Box-behnken design (BBD), response surface methodology (RSM)
5. *Drosophila melanogaster* model
6. Genotoxicity (AMES test, SMART wing spot test in *drosophila*)



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TRAINING

2024

- Meta-Analysis from Scratch to Publication, Chiang Mai University

2023

- Spectramax ID3 microplate reader and softmax pro software
- Speedvac Vacuum Concentrator Model: SPD140DDA-230 Thermo
- Seminar of Scanning Electron Microscope (SEM) Technique

2022

- GC-HRMS Orbitrap Exploris Operation
- Seminar of Workshop of Pesticides Analysis By GCQQQ

2020

- Basic of Real-Time PCR and Operation of QuantStudio 5 Real-Time PCR System
- Principle Instrumentation and Applications of UHPLC-MSMS

RESEARCH PROJECT

Principial investigator

2024

- Development of extraction conditions for chili paste and assessment of the anti-diabetic activities of chili paste extract using *Drosophila* as a model organism (Funding Source: Fundamental Fund Basic Research Fund, Thailand)

2023

- Optimization extraction conditions for improving phenolic content and antioxidant activity from Cake of *Hodgsonia heteroclita* using Response Surface Methodology (Funding Source: Institute of Nutrition, Mahidol University, Thailand)

Co-Principial investigator

2025

- A molecular investigation into the protective functions of *Citrus maxima* peel against endocrine-disrupting pollutants-induced adiposity (Funding Source: Fundamental Fund Basic Research Fund, Thailand)
- Protective effects of Citrus maxima peel on muscle wasting and pre-mature aging induced by endocrine-disrupting pollutants: a study in skeletal muscle cells and in *Drosophila* (Funding Source: Fundamental Fund Basic Research Fund, Thailand)
- Research and development of *Wolffia globosa* as a functional food for prevention of metabolic diseases related to aging and induced by endocrine-disrupting pollutants (Funding Source: Fundamental Fund Basic Research Fund, Thailand)

2024

- Development of *Hodgsonia heteroclita* (Roxb.) oil nanoemulsion and protein hydrolysate from its residual waste (Funding Source: Mahidol University, Thailand)



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2023

- The development of protein hydrolysates with bioactivities from cricket for application in functional foods (Funding Source: Agricultural Research Development Agency (Public Organization), Thailand)
- Investigation on Bioactive compounds, Antioxidation properties and Suppression of Bisphenol A-mediated Toxicity of *Citrus maxima* (Burm.f.) Merr. peel extracts (Funding Source: Mahidol University, Thailand)
- Enhancement of neuroprotective effects of donepezil with Extract from *Diplazium esculentum* (Funding Source: Mahidol University, Thailand)
- Green extraction optimization extraction of BACE-1 inhibitor-enriched extract from *Diplazium esculentum* (Retz.) Sw. using response surface methodology (RSM) (Funding Source: World University Rankings by Subject (Specific League Funds), Mahidol University, Thailand)

2022

- Investigation on bioactive compound profiles and biological properties of cocoa pod husk for food waste management and value added (Funding Source: Agricultural Research Development Agency (Public Organization), Thailand)

2021

- Investigation on the preventive effects of nanoemulsion loaded with *Oroxylum indicum* extract against Alzheimer's disease and its genotoxicity testing (Funding Source: Agricultural Research Development Agency (Public Organization), Thailand)
- Innovative nanoemulsion loaded with *Oroxylum indicum* extract for Alzheimer's disease prevention (Funding Source: Agricultural Research Development Agency (Public Organization), Thailand)

PUBLICATION (listed in SCOPUS)

First author

2024

- **Inthachat, W.;** Chantong, B.; Pitchakarn, P.; Takoon, C.; Karinchai, J.; Suttisansanee, U.; Temviriyankul, P. Enhancing Therapeutic Efficacy of Donepezil, an Alzheimer's Disease Drug, by *Diplazium esculentum* (Retz.) Sw. and Its Phytochemicals. *Pharmaceuticals* 2024, 17, 341.

2023

- **Inthachat, W.;** Temviriyankul, P.; On-Nom, N.; Kanoongon, P.; Thangsiri, S.; Chupeerach, C.; Suttisansanee, U. Optimization of Phytochemical-Rich *Citrus maxima* Albedo Extract Using Response Surface Methodology. *Molecules* 2023, 28, 4121.
- **Inthachat, W.;** Thangsiri, S.; Khemthong, C.; On-Nom, N.; Chupeerach, C.; Sahasakul, Y.; Temviriyankul, P.; Suttisansanee, U. Green Extraction of *Hodgsonia heteroclita* Oilseed Cake Powder to Obtain Optimal Antioxidants and Health Benefits. *Foods* 2023, 12, 4281.



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2022

- **Inthachat, W.**, Suttisansanee, U., Kruawan, K., On-Nom, N., Chupeerach, C., & Temviriyankul, P. (2022). Evaluation of Mutagenicity and Anti-Mutagenicity of Various Bean Milks Using *Drosophila* with High Bioactivation. *Foods*, 11(19), 3090.

Co- author

2024

- Pinkaew, T.; **Inthachat, W.**; Khemthong, C.; Kemsawasd, V.; On-Nom, N.; Temviriyankul, P. High Pectin Recovery from *Cocoa Husks* Using an Autoclave Approach: An Analysis of Its Physicochemical, Structural, and Genotoxicity Properties. *Foods* 2024, 13, 669.
- On-Nom, N.; Thangsiri, S.; **Inthachat, W.**; Temviriyankul, P.; Sahasakul, Y.; Aursalung, A.; Chupeerach, C.; Suttisansanee, U. Optimized Conditions for the Extraction of Phenolic Compounds from *Aeginetia indica* L. and Its Potential Biological Applications. *Molecules* 2024, 29, 1050.
- Kongsung S, **Inthachat W**, Chantong B, Suttisansanee U, On-Nom N, Chupeerach C, et al. Box–Behnken Design-Based Optimization of Phytochemical Extraction from *Diplazium esculentum* (Retz.) Sw. Associated with Its Antioxidant and Anti-Alzheimer’s Properties. *Molecules*. 2024;29(10).
- Pitchakarn P, Ting P, Buacheen P, Karinchai J, **Inthachat W**, Chantong B, et al. Multi-Endpoint Toxicological Assessment of Chrysin Loaded Oil-in-Water Emulsion System in Different Biological Models. *Nanomaterials*. 2024;14(12).
- Pitchakarn P, Buacheen P, Taya S, Karinchai J, Temviriyankul P, **Inthachat W**, et al. Anti-Inflammatory, Cytotoxic, and Genotoxic Effects of Soybean Oligopeptides Conjugated with Mannose. *Foods*. 2024;13(16).
- Thangsiri S, **Inthachat W**, Temviriyankul P, Sahasakul Y, Trisonthi P, Pan-utai W, et al. Bioactive compounds and in vitro biological properties of *Arthrospira platensis* and *Athrospira maxima*: a comparative study. *Scientific Reports*. 2024;14(1).
- Temviriyankul P, Chansawhang A, **Inthachat W**, Supasawat P, Phochantachinda S, Pitchakarn P, et al. Phikud Navakot Extract Acts as an ER Stress Inhibitor to Ameliorate ER Stress and Neuroinflammation. *Heliyon*. 2024: e39700.

2023

- Temviriyankul, P., Chansawhang, A., Karinchai, J., Phochantachinda, S., Buranasinsup, S., **Inthachat, W.**, Pitchakarn, P., Chantong, B. (2023). *Kaempferia parviflora* Extracts Protect Neural Stem Cells from Amyloid Peptide-Mediated Inflammation in Co-Culture Model with Microglia. *Nutrients*, 15(5), 1098.
- Luu, L. K., Thangsiri, S., Sahasakul, Y., Aursalung, A., **Inthachat, W.**, Temviriyankul, P., On-Nom, N., Chupeerach, C., Suttisansanee, U. (2023). Nutrients, Phytochemicals and In Vitro Disease Prevention of *Nephelium hypoleucum* Kurz Fruit. *Nutrients*, 15(4), 950.
- On-nom, N.; Thangsiri, S.; **Inthachat, W.**; Temviriyankul, P.; Sahasakul, Y.; Chupeerach, C.; Pruesapan, K.; Trisonthi, P.; Siriwan, D.; Suttisansanee, U. Seasonal



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Effects on Phenolic Contents and In Vitro Health-Promoting Bioactivities of Sacred Lotus (*Nelumbo nucifera*). *Plants* 2023, 12, 1441.

- Sahasakul, Y.; Aursalung, A.; Thangsiri, S.; Temviriyankul, P.; **Inthachat, W.**; Pongwichian, P.; Sasithorn, K.; Suttisansanee, U. Nutritional Compositions, Phenolic Contents and Antioxidant Activities of Rainfed Rice Grown in Different Degrees of Soil Salinity. *Foods* 2023, 12, 2870.
- Buacheen, P.; Karinchai, J.; **Inthachat, W.**; Butkinaree, C.; Jankam, C.; Wongnoppavich, A.; Imsumran, A.; Chewonarin, T.; Pimpha, N.; Temviriyankul, P.; et al. The Toxicological Assessment of *Anoectochilus burmannicus* Ethanolic-Extract-Synthesized Selenium Nanoparticles Using Cell Culture, Bacteria, and *Drosophila melanogaster* as Suitable Models. *Nanomaterials* 2023, 13, 2804.
- On-Nom, N., Thangsiri, S., **Inthachat, W.** et al. Phenolic profiles and in vitro biochemical properties of Thai herb ingredients for chronic diseases prevention. *Sci Rep* 13, 21690 (2023).
- Suttisansanee U, Thiyajai P, **Inthachat W**, Pruesapan K, Wongwathanarat K, Charoenkiatkul S, et al. Exploration of the nutritional and carotenoids profiles of vegetables in Thai cuisine as potential nutritious ingredients. *Heliyon*. 2023;9(5).
- On-Nom N, Promdang P, **Inthachat W**, Kanoongon P, Sahasakul Y, Chupeerach C, et al. *Wolffia globosa*-Based Nutritious Snack Formulation with High Protein and Dietary Fiber Contents. *Foods*. 2023;12(14).

2022

- 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. (2022). Impact of drying processes on phenolics and in vitro health-related activities of indigenous plants in Thailand. *Plants*, 11(3), 294.
- Kemsawasd, V., **Inthachat, W.**, Suttisansanee, U., & Temviriyankul, P. (2022). Road to the red carpet of edible crickets through integration into the human food chain with biofunctions and sustainability: A review. *International Journal of Molecular Sciences*, 23(3), 1801.
- Sahasakul, Y., Aursalung, A., Thangsiri, S., Wongchang, P., Sangkasa-Ad, P., Wongpia, A., Polpanit, A., **Inthachat, W.**, Temviriyankul, P., Suttisansanee, U. (2022). Nutritional compositions, phenolic contents, and antioxidant potentials of ten original lineage beans in Thailand. *Foods*, 11(14), 2062.
- Temviriyankul, P., Kittibunchakul, S., Trisonthi, P., Kunkeaw, T., **Inthachat, W.**, Siriwan, D., & Suttisansanee, U. (2022). *Mangifera indica* 'Namdokmai' Prevents Neuronal Cells from Amyloid Peptide Toxicity and Inhibits BACE-1 Activities in a *Drosophila* Model of Alzheimer's Amyloidosis. *Pharmaceuticals*, 15(5), 591.
- Chupeerach, C., Temviriyankul, P., Thangsiri, S., **Inthachat, W.**, Sahasakul, Y., Aursalung, A., Wongchang, P., Sangkasa-ad, P., Wongpia, A., Polpanit, A., Nuchuchua, O., Suttisansanee, U. (2022). Phenolic Profiles and Bioactivities of Ten Original Lineage Beans in Thailand. *Foods*, 11(23), 3905.



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2021

- Temviriyankul, P., Kittibunchakul, S., Trisonthi, P., **Inthachat, W.**, Siriwan, D., & Suttisansanee, U. (2021). Analysis of phytonutrients, anti-mutagenic and chemopreventive effects of tropical fruit extracts. *Foods*, 10(11), 2600.
- Pitchakarn, P., **Inthachat, W.**, Karinchai, J., & Temviriyankul, P. (2021). Human Hazard Assessment Using *Drosophila* Wing Spot Test as an Alternative In Vivo Model for Genotoxicity Testing—A Review. *International Journal of Molecular Sciences*, 22(18), 9932.
- Suttisansanee, U., Pitchakarn, P., Ting, P., **Inthachat, W.**, Thiyajai, P., Rodthayoy, D., . . . Temviriyankul, P. (2021). Health-promoting bioactivity and in vivo genotoxicity evaluation of a hemiepiphyte fig, *Ficus dubia*. *Food Science & Nutrition*, 9(4), 2269-2279.
- Kunkeaw, T., Suttisansanee, U., Trachootham, D., Karinchai, J., Chantong, B., Potikanond, S., **Inthachat, W.**, Pitchakarn, P., Temviriyankul, P. (2021). *Diplazium esculentum* (Retz.) Sw. reduces BACE-1 activities and amyloid peptides accumulation in *Drosophila* models of Alzheimer's disease. *Scientific Reports*, 11(1), 1-11.
- Wannasaksri, W., Temviriyankul, P., Aursalung, A., Sahasakul, Y., Thangsiri, S., **Inthachat, W.**, On-Nom, N., Chupeerach, C., Pruesapan, K., Suttisansanee, U., Charoenkiatkul, S. (2021). Influence of Plant Origins and Seasonal Variations on Nutritive Values, Phenolics and Antioxidant Activities of *Adenia viridiflora* Craib., an Endangered Species from Thailand. *Foods*, 10(11), 2799.

2020

- Jantrapirom, S., Nimlamool, W., Chattipakorn, N., Chattipakorn, S., Temviriyankul, P., **Inthachat, W.**, Govitrapong, P., Potikanond, S. (2020). Liraglutide suppresses tau hyperphosphorylation, amyloid beta accumulation through regulating neuronal insulin signaling and BACE-1 activity. *International Journal of Molecular Sciences*, 21(5), 1725.
- Temviriyankul, P., Sritalahareuthai, V., Jom, K. N., Jongruaysup, B., Tabtimsri, S., Pruesapan, K., Thangsiri, S., **Inthachat, W.**, Siriwan, D., Charoenkiatkul, S., Suttisansanee, U. (2020). Comparison of phytochemicals, antioxidant, and in vitro anti-Alzheimer properties of twenty-seven *Morus* spp. cultivated in Thailand. *Molecules*, 25(11), 2600.

PRESENTATION

JAPAN-ASEAN Seminar 2022 on 28th January 2022, Topic: Reduction of amyloid beta accumulation through suppression of BACE-1 activities by *Diplazium esculentum* (Retz.) Sw. in *Drosophila* models of Alzheimer's amyloidosis. (oral presentation)