



## Curriculum Vitae

Institute of Nutrition, Mahidol University (INMU)  
999 Phutthamonthon 4 Rd., Salaya, Phutthamonthon  
Nakhon Pathom 73170, Thailand

**NAME** DUNYAPORN TRACHOOTHAM  
ดุลยพร ตราชูธรรม

**Email Address:** dunyaporn.tra@mahidol.ac.th; dunyaporn.tra@mahidol.edu

**Current positions:** Associate Professor  
Program Director, Master of Science in Toxicology and Nutrition for  
Food Safety  
Vice Chair, Food and Nutrition Academic and Research Cluster  
Secretary committee, Mahidol University Central Institutional Review  
Board (MU-CIRB)

### Education:

PhD Biomedical Sciences (Pharmacology)	University of Texas Health Sciences Center at Houston, Texas	USA
DDS (Dentistry) (First class honored)	Mahidol University	Thailand
Cert. (Nutrition Science for health professionals)	Friedman School of Nutrition, Tuft University, Boston	USA

### Training:

Postdoctoral fellow (Cancer research)	MD Anderson Cancer Center, Houston, Texas	USA
Standard course in Clinical trials	Faculty of Medicine, Chulalongkorn University	Thailand
ICH-GCP	MU-Center of Ethics in Research Training CITI program	Thailand USA
Food Safety assessment of GM plant	BIOTEC, NSTDA	Thailand
Food Safety Assessor	Thailand Risk Assessment center	Thailand
Nutrigenomics: Genetic Testing for Personalized Nutrition	Dietitians of Canada	Canada

### Research Interest and Expertise

1. Research and development of functional food for cancer prevention (innovation to reduce food-derived carcinogens, promote detoxification and reduce risk of cancer progression)
2. Research and development of food products for patients with compromised oral functions (chewing and swallowing difficulties/ dysphagia, dry mouth, taste disorders)
3. Research and development of food products for prevention of sarcopenia in the elderly and cachexia in cancer patients
4. Clinical safety, pharmacokinetic and efficacy trials of functional and medical food products (outcome: nutritional status, immune response, defecation, liver function, detoxification)
5. Dietary factors and cancer risk assessment
6. Taste disorders and nutrition
7. Precision/ personalized nutrition: Metabolomics, Nutrigenomics, and Microbiota

### Professional experiences

#### 1. Assessor

#### Thai Food and Drug Administration (FDA)

- Scientific integrity of health claim application
- Scientific integrity of dietary supplement application



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- Scientific assessment of the project "Fluoridated milk for primary school children" Bureau of Nutrition, Department of Health, Ministry of Health

### **Thailand Risk Assessment Center (TRAC)**

- Safety of novel food

### **BIOTEC, NSTDA**

- Safety (toxicology part) of genetically modified (GM) plant food

### **2. Committee**

- Secretary Committee and IRB administrator, Mahidol University Central Institutional Review Board (MU-CIRB)
- Committee, Special IRB - Mahidol University Central Institutional Review Board for COVID19-related projects
- Ethics committee of Mahavajiralongkorn Thanyaburi Cancer Center

### **Thai Food and Drug Administration (FDA)**

- Committee, Drafting regulatory guidelines of food for elderly with chewing and swallowing problems
- Committee (representative of INMU), Food for a special purpose, and health claims
- Committee (representative of INMU), Committee on Strategic drives in food and nutrition for better quality of life, National Food Board

### **Bureau of Nutrition, Ministry of Public Health**

- Drafting Thai Dietary Recommendation Intake (DRI) 2020 for vitamin and minerals with antioxidant property

### **National Bureau of Agricultural Commodity and Food Standards**

- Drafting guidelines to assess the safety of genetically modified plant

### **3. Reviewer**

- **Journal peer review:** Food & Function, Food Research International, Nutrition and Cancer, Biological Trace Element Research, Oncotarget, Supportive Care in Cancer, Journal of Functional Food, Journal of Texture Studies, Oxidative Medicine and Cellular Longevity, Thai Journal of Toxicology
- **Grant review:** RSA grant, Thailand Science Research, and Innovation; Medical Food grant, Agricultural Research Development Agency (Public Organization)

### **4. Dentist (2011 – present)**

### **Publications (International Level)**

1. Khoonin W, Shantavasinkul PC, Santivarangkna C, **Trachootham D**. Loss of Eicosapentaenoic Acid (EPA) after Retort Sterilization of the EPA-BCAA Fortified Complete Nutrition Drink. *Foods*. 2022; 11(14):2023.  
<https://doi.org/10.3390/foods11142023>
2. Sahasakul Y, Angkhasirisap W, Lam-ubol A, Aursalung A, Sano D, Takada K, **Trachootham D**. Partial Substitution of Glucose with Xylitol Prolongs Survival and



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- Suppresses Cell Proliferation and Glycolysis of Mice Bearing Orthotopic Xenograft of Oral Cancer. *Nutrients* 2022, 14, 2023. <https://doi.org/10.3390/nu14102023>
3. Wongniyomkaset W, Rungraung N, Muangpracha N, Winuprasith T, **Trachootham D**. Complete nutrition drink with retrograded starch is low glycemic, and the individual glucose response to the low glycemic complete nutrition drink depends on fasting insulin levels and HOMA-IR in a randomized cross-over control trial. *J Nutr Sci* 2022, 11, E25. doi:10.1017/jns.2022.23
  4. Phucharoenrak P, Muangnoi C, **Trachootham D**. A Green Extraction Method to achieve the Highest Yield of Limonin and Hesperidin from Lime Peel Powder (*Citrus aurantifolia*). *Molecules* 2022, 27, 820. <https://doi.org/10.3390/molecules27030820>
  5. Kunkeaw T, Suttisansanee U, **Trachootham D**, Karinchai J, Chantong B, Potikanond S, Inthachat W, Pitchakarn P, Temviriyankul P. *Diplazium esculentum* (Retz.) Sw. reduces BACE-1 activities and amyloid peptides accumulation in *Drosophila* models of Alzheimer's disease. *Sci Rep*. 2021; 11(1): 23796. <https://doi.org/10.1038/s41598-021-03142-w>
  6. Kaewsit N, Winuprasith T, **Trachootham D**. Detoxification of Heterocyclic Aromatic Amines from Grilled Meat by PEITC-rich Vegetable Sauce: A Randomized Crossover Controlled Trial. *Food & Function*. 2021, 12 (21), 10411-10422. doi: 10.1039/D1FO01733K
  7. **Trachootham D**, Whanmek K, Praengam K, Temviriyankul P and Santivarangkna C. 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*. 2021;12(20):10147-10159 doi: 10.1039/D1FO01485D
  8. **Trachootham D**, Thongyen S, Lam-Ubol A, Chotechuang N, Pongpirul W, Prasithsirikul W. Simultaneously Complete but Not Partial Taste and Smell Losses were Associated with SAR-CoV-2 Infection. *Int J Infect Dis*. 2021 106: 329–337. doi: 10.1016/j.ijid.2021.03.083.
  9. Khuropakhonphong K, Whanmek K, Purttiponhanee S, Chathiran W, Srichamnong W, Santivarangkna C, **Trachootham D**. Bulgarian yogurt relieved symptoms and distress and increased fecal short-chain fatty acids in healthy constipated women: A randomized, blinded crossover controlled trial. *NFS J*. 2021; 22: 20-31. doi:10.1016/j.nfs.2020.12.005.
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10. Lam-Ubol A, Matangkasombut O, **Trachootham D**, et al. Efficacy of gel-based artificial saliva on Candida colonization and saliva properties in xerostomic post-radiotherapy head and neck cancer patients: a randomized controlled trial. *Clin Oral Investig.* 2021; 25(4): 1815–1827. doi:10.1007/s00784-020-03484-1
11. Nuchit S, Lam-Ubol A, Paemuang W, Talungchit S, Chokchaitam O, Mungkung O, Pongcharoen T, **Trachootham D**. Alleviation of Dry Mouth by Saliva Substitutes Improved Swallowing Ability and Clinical Nutritional Status of Post-Radiotherapy Head and Neck Cancer Patients: A Randomized Controlled Trial Alleviation of dry mouth by saliva substitutes improved swallowing ability and clinical nutritional status of post-radiotherapy head and neck cancer patients: a randomized controlled trial. *Support Care Cancer.* 2020; 28(6):2817-2828. doi:10.1007/s00520-019-05132-1
12. Tarapan S, Matangkasombut O, **Trachootham D**, Sattabanasuk V, Talungchit S, Paemuang W, Phonyiam T, Chokchaitam O, Mungkung OO, Lam-Ubol A. Oral Candida colonization in xerostomic postradiotherapy head and neck cancer patients. *Oral Dis.* 2019; 25 (7), 1798- 1808. doi: 10.1111/odi.13151.
13. Suttireung P, Winuprasith T, Srichamnong W, Paemuang W, Phonyiam T, **Trachootham D**. Riceberry Rice Puddings: Rice-based Low Glycemic Dysphagia Diets. *Asia Pacific J Clin Nutr.* 2019; 28(3):467-475, doi: 10.1633/apjcn.201906/PP.0003
14. **Trachootham D**, Khoonin W. Disrupting Redox Stabilizer: A Novel Therapeutic Strategy for Colorectal Cancer. *Cancer Communications*, 2019; 39(1):9 <https://doi.org/10.1186/s40880-019-0355-y>
15. Vittayakasemsont K, Klaithong C, Phukosib K, Chavasit V, Sinthusek T, **Trachootham D**. Association between Pre-treatment Dietary Preference and Weight Loss after Radiation Therapy in Head and Neck Cancer Patients: A Pilot Study. *Nutr Cancer* 2019; 71(2): 230-239. doi: 10.1080/01635581.2019.1578393.
16. Treesattayakul B, Winuprasith T, Theeranuluk B, **Trachootham D**. Loss of Posterior Occluding Teeth and Its Association with Protein-Micronutrients Intake and Muscle Mass among Thai Elders: A Pilot Study. *J Frailty Aging.* 2019; 8(2):100-103. doi: 10.14283/jfa.2019.2.
17. Tippairrote T, Temviriyankul P, Benjapong W, **Trachootham D**. Prevalence and Factors Associated with High Levels of Aluminum, Arsenic, Cadmium, Lead, and Mercury in Hair Samples of Well-Nourished Thai Children in Bangkok and Perimeters. *Biol Trace Elem Res.* 2019;188(2): 334–343



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18. Lam-Ubol A, Fitzgerald AL, Ritdej A, Phonyiam T, Zhang H, Myers JN, Huang P, **Trachootham D**. Sensory acceptable equivalent doses of  $\beta$ -phenylethyl isothiocyanate (PEITC) induce cell cycle arrest and retard the growth of p53 mutated oral cancer in vitro and in vivo. *Food Funct.* 2018; 9: 3640–3656 (*back-covered article*)
19. Tippairote T, **Trachootham D**. Zinc Status in Hair Samples and Common Neurodevelopmental Disorders. *J Neurol Neuromed.* 2018; 3(1): 8-12.
20. **Trachootham D**, Sato-Kuriwada S, Lam-Ubol A, Promkam C, Chotechuang N, Sasano T, Shoji N. Differences in taste perception and spicy preference: a Thai - Japanese cross- cultural study. *Chem Senses.* 2018; 43(1): 65-74.
21. **Trachootham D**, Chingsuwanrote P, Yoosadiang P, Mekkrangkrai D, Ratchawong T, Buraphacheep N, Kijanukul S, Saekhowh S, Pongpichayadeji O, Vongvachvasinj K, Sittikornpaiboon P, Tuntipopipat S. Partial Substitution of Glucose with Xylitol Suppressed the Glycolysis and Selectively Inhibited the Proliferation of Oral Cancer Cells. *Nutr Cancer* 2017; 69 (6): 862–872
22. **Trachoothama D**, Chupeeracha C, Tuntipopipat S, Pathomyok L, Boonnak K, Praengam K, Promkam C, Santivarangkna C. Drinking fermented milk containing *Lactobacillus paracasei* 431 (IMULUS™) improves immune response against H1N1 and cross-reactive H3N2 viruses after influenza vaccination: A pilot randomized triple-blinded placebo controlled trial. *J Functional Foods.* 2017; 33: 1-10
23. Tippairote T, Temviriyankul P, Benjapong W, **Trachootham D**. Hair Zinc and Severity of Symptoms Are Increased in Children with Attention Deficit and Hyperactivity Disorder: a Hair Multi-Element Profile Study. *Biol Trace Elem Res.* 2017; 179 (2): 185-194
24. Madiloggovit J, Chotechuang N, **Trachootham D**. Impact of self-tongue brushing on taste perception in Thai older adults: A pilot study. *Geriatr Nurs.* 2016; 37(2): 138-36
25. Dalodom S, Lam-ubol A, Jeanmaneechotechai S, MS, Takamfoo L, Intachai W, Duangchada K, Hongsachum B, Kanchanatiwat P, Vacharotayangul P, **Trachootham D**. Influence of oral moisturizing jelly as a saliva substitute for the relief of xerostomia in elderly patients with hypertension and diabetes mellitus. *Geriatr Nurs.* 2016; 37(2): 101-9.
26. **Trachootham D**, Songkaew W, Hongsachum B, Wattana C, Changkluengdee N, Karapoch J, Thirduittironnapi S, Meennuch E, Klaitong C, Sinthusek T, Lam-



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- Ubol A. Nutri-jelly may improve quality of life and decrease tube feeding demand in head and neck cancer patients. *Support Care Cancer*. 2015; 23(5):1421-30.
27. **Trachootham D**, Chen G, Zhang W, Lu W, Zhang H, Liu J, Huang P. Loss of p53 in stromal fibroblasts promotes epithelial cell invasion through redox-mediated ICAM1 signal. *Free Radic Biol Med*. 2013 May; 58:1-13 doi: 10.1016/j.freeradbiomed.2013.01.011
28. Zhang W, **Trachootham D**, Liu J, Chen G, Pelicano H, Garcia-Prieto C, Lu W, Burger JA, Croce CM, Plunkett W, Keating MJ, Huang P. Stromal control of cystine metabolism promotes cancer cell survival in chronic lymphocytic leukaemia. *Nat Cell Biol*. 2012 Feb 19; 14(3):276-86
29. Hu Y, Lu W, Chen G, Wang P, Chen Z, Zhou Y, Ogasawara M, **Trachootham D**, Feng L, Pelicano H, Chiao PJ, Keating MJ, Garcia-Manero G, Huang P. K-ras (G12V) transformation leads to mitochondrial dysfunction and a metabolic switch from oxidative phosphorylation to glycolysis. *Cell Res*. 2012; 22(2):399-412 DOI: 10.1038/cr.2011.145
30. Chen G, Wang F, **Trachootham D**, Huang P. Preferential killing of cancer cells with mitochondrial dysfunction by natural compounds. *Mitochondrion*. 2010; 10(6):614-25 DOI: 10.1016/j.mito.2010.08.001
31. **Trachootham D**, Alexandre J, Huang P. Targeting cancer cells by ROS-mediated mechanisms: a radical therapeutic approach? *Nat Rev Drug Discov*. 2009; 8(7): 579-91. DOI: 10.1038/nrd2803
32. **Trachootham D**, Lu W, Ogasawara MA, Nilsa RD, Huang P. Redox regulation of cell survival. *Antioxid Redox Signal*. 2008; 10(8):1343-74.
33. **Trachootham D**, Zhang H, Zhang W, Feng L, Du M, Zhou Y, Chen Z, Pelicano H, Plunkett W, Wierda WG, Keating MJ, Huang P. Effective elimination of fludarabine-resistant CLL cells by PEITC through a redox-mediated mechanism. *Blood*. 2008; 112(5):1912-22
34. Zhang H, **Trachootham D**, Lu W, Carew J, Giles FJ, Keating MJ, Arlinghaus RB, Huang P. Effective killing of Gleevec-resistant CML cells with T315I mutation by a natural compound PEITC through redox-mediated mechanism. *Leukemia*. 2008; 22(6):1191
35. Demizu Y, Sasaki R, **Trachootham D**, Pelicano H, Colacino JA, Liu J, Huang P. Alterations of cellular redox state during NNK-induced malignant transformation and resistance to radiation. *Antioxid Redox Signal*. 2008; 10(5):951-61.
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36. **Trachootham D**, Zhou Y, Zhang H, Demizu Y, Chen Z, Pelicano H, Chiao PJ, Achanta G, Arlinghaus RB, Liu J, Huang P. Selective killing of oncogenically transformed cells through a ROS-mediated mechanism by beta-phenylethyl isothiocyanate. *Cancer Cell*. 2006; 10(3): 241-52. (*front-covered article*)

### National level

1. Amornsil P, Winuprasith T, **Trachootham D**. Effect of Nutri-Jelly Matrix on Cytotoxicity of Phenethyl Isothiocyanate in Oral Cancer Cells. *Thai J Toxicol*. 2020; 35(1): 75-93
2. Amornsil P, Trachootham D. PEITC: Functional Compound for Primary and Tertiary Chemoprevention of Cancer. *Thai J Toxicol*. 2019; 34(2): 75-93
3. Vittayakasemsont K, Klaithong C, Phukosi K, Chavasit V, **Trachootham D**. Nutritional Status of Thai Patients with Head and Neck Cancer During and After Completion of Radiotherapy. *J Dep Med Serv*. 2018; 43 (5): 99-104
4. Tippairrote T, Temviriyankul P, Benjapong W, **Trachootham D**. A pilot case-control study of lead and other hazardous elements in hair samples and risk of attention deficit and hyperactivity disorders in Thai children. *Thai J Toxicology* (special issue): proceedings of the 7th National Conference in Toxicology (NCT7), 2016.
5. Sutthisawas N, **Trachootham D**, Wattanavijitkul T. Pharmacokinetic, safety and tolerability studies after single and multiple oral administration of Phenethyl isothiocyanate in Nutri Jelly. *Chula Med J*. 2015; 59:631

### Proceedings

1. Phikulkao N, Tanaviyupakdee P, Trachootham D. Association between Alcohol Drinking and Detoxification Metabolism of Carcinogens derived from Tobacco Smoking. Proceedings of The 11th National Conference in Toxicology (NCT11) "Toxicology and Safety Concern towards Pandemic Era", Virtual conference, 27-28 October 2021.
2. Treesattayakul B, Winuprasith T, Teeranurak B, **Trachootham D**. Inadequate intake of Dietary Fiber, Vitamin B12, and Calcium in Thai Elders. Proceedings of the 1st International Conference on Innovations in Food Ingredients & Food Safety (IFIFS 2018) Bangkok, Thailand, 12-13 September 2018 Paper ID: 40





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3. Paemuang W, Rojrungrasinkul N, Santivarangkna C, **Trachootham D**. Development and validation of EAT-ABLE, a novel tool for self-assessment of ability to eat. Proceedings of the 9<sup>th</sup> International Graduate Students Conference on Population and Public Health Sciences (IGSCPP), Chulalongkorn University, Thailand, 24 July 2018
4. Theabratana P, Lamubol A, Pongcharoen T, **Trachootham D**. The Association between Taste Preference and Relevant Dietary Consumption in Thai Adults. 0th World Congress on Clinical Nutrition (WCCN), December 14-16, 2016: Rama Gardens Hotel, Bangkok, THAILAND

### Books

1. Tippairote T, Karnpanit W, Trachootham D. (2019) Sources of Arsenic Exposure in Well-Nourished Children. In: Fares A., Singh S. (eds) Arsenic Water Resources Contamination. Advances in Water Security. Springer, Cham. [https://doi.org/10.1007/978-3-030-21258-2\\_4](https://doi.org/10.1007/978-3-030-21258-2_4)
2. Trachootham D. Chapter 7: Research and development of functional foods for specific type of cancer. In: Martirosyan DM, Zhou JR. Functional foods and cancer: Functional Foods in Integrative Oncology. Volume 5. First edition. Texas, USA: Functional Food Center; 2017. p. 135–156. ISBN-13: 978-1976255342
3. Trachootham D. Eat Right Fight Cancer. Amarin Pringting, BKK, 2017, ISBN: 978-616-18-2068- 8
4. Trachootham D. Anti-cancer Recipe. Amarin Pringting, BKK, 2017, ISBN: 978-616-18-2073-2
5. Trachootham D, Wan Zhang and Peng Huang. Chapter 7: oxidative stress and cancer drug resistance. In the book: Drug resistance in Cancer Cells, Springer, NY, 2009, ISBN:978-0-387- 89445-4
6. Trachootham D, Madilogkowitz J. Chapter 2: Physiologic and pathologic changes of oral aging, prevention and management of oral diseases in elderly people. In: Clinical Practice Guideline for Geriatric Dentistry, Neurological Prasat Institute, Ministry of Health, 2014

### Patent

Swallowing Practice Drink, filed by Mahidol University, Thailand

Oral Moisturizing Jelly, filed by Dental Innovation Foundation under royal patronage

Nutri-jelly, filed by Dental Innovation Foundation under royal patronage

Nano-PEITC, filed by MD Anderson Cancer Center, USA

### Trade secret





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Vegetable sauce for promoting detoxification of carcinogens derived from grilled meat  
Fermented milk for promoting detoxification of carcinogens derived from alcohol drinking

### **Copy right**

TASTE-26 Questionnaire

EAT-ABLE Questionnaire

Mobile application: EAT-ABLE

**FDA certified product** Nutri-jelly, texture-modified diet for people with chewing and swallowing difficulties (distributed by Dental Innovation Foundation under royal patronage)

### **Graduate Advisory Experiences**

#### **PhD level**

##### **Major advisor**

Watacharapol Koonin, MS – ongoing PhD program in Nutrition, Mahidol University & RRI grant awardee from NRCT

##### **Co-advisor**

Montree Toso, graduated PhD in Oral Science, Thammasat University, 2017

#### **MS level**

- Torsak Tippairote, MD (medicine) - graduated MS (Food and Nutritional Toxicology), Mahidol University, 2016 & NRCT grant awardee & MU Outstanding Thesis awardee, 2019
- Pakaorn Tiabrat, BNS (nursing) - graduated MS (Nutrition and Dietetics), Mahidol University, 2017
- Kanoknun Vittayakasemsont, BS (Home economics: food and nutrition) - graduated MS (Nutrition), Mahidol University, 2018 & MU Outstanding Thesis awardee, 2020
- Budtree Treesattayakul, BS (nutrition) - graduated MS (Nutrition and Dietetics), Mahidol University, 2018 & Best poster award IFIFS 2018
- Wannaporn Paengam, BNS (Nursing) - graduated MS (Nutrition and Dietetics), Mahidol University, 2018 & SPENT grant awardee, 2017
- Prangtip Suttireung, BS (Medical Technology) - graduated MS (Nutrition and Dietetics), Mahidol University, 2019
- Sumalee Nuchit, BS (Nutrition) - graduated MS (Nutrition and Dietetics), Mahidol University, 2019, A finalist of Outstanding thesis award 2021
- Pathumrat Amornsil, BS (Food science for health) – graduated MS (Toxicology and



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- Nutrition for Food Safety) , Mahidol University, 2019 & Best Presenter Award "Talks about Tox" & Second prize quiz award at World Food Safety day event , FAO
- Rata Khuropakhonphong, BS (Psychology) - graduated MS (Nutrition and Dietetics), Mahidol University, 2020, published in NFS Journal (Q2 Journal)
  - Sophida Suta, BS (Biotechnology) - graduated MS (Toxicology and Nutrition for Food Safety – Special program), 2020
  - Nitipon Kaewsit, BS (Microbiology) - graduated MS (Toxicology and Nutrition for Food Safety – Special program), 2021, published in *Food & Function* (Q1 Journal)
  - Nattapong Pikulkao, BS (Agricultural chemistry) – graduated MS (Toxicology and Nutrition for Food Safety)
  - Warisara Wongniyomkaset, BS (Food and Nutrition) – "pass" defense of MS (Nutrition and Dietetics), Mahidol University, published in *Journal of Nutritional Sciences* (Q1 Journal)
  - Pakkapong Phucharoenrak, BS (Home economics: nutrition and dietetics) – ongoing MS (Toxicology and Nutrition for Food Safety), Awardee of The 60th Year Supreme Reign of His Majesty King Bhumibol Adulyadej Scholarship, , published in *Molecules* (Q1 Journal)

### Co-advisor

- Panitnart Kanjanatiwat, BS (Food sciences and technology)  
Graduated MS (Food sciences for better nutrition), Mahidol University, 2014
  - Jandanee Karapoch, BNS (Nursing)  
Graduated MS (Nutrition and dietetics), Mahidol University, 2015
  - Narueporn Sutthisawas, Pharm.D  
Graduated MS (Clinical Pharmacology), Chulalongkorn University, 2016
  - Thanit Koonkaew, BS (Biomedical sciences)  
Graduated MS (Food and Nutritional Toxicology), Mahidol University, 2018
  - Virat Wonsaengnak, MD (medicine)  
Graduated MS (Food and Nutritional Toxicology), Mahidol University, 2018
  - Supanat Tarapan, DDS (Dentistry)  
Graduated MS (Oral and Maxillofacial Sciences), Srinakarinwirot University, 2018
  - Chanika Chimkerd, BS  
Graduated MS (Food Sciences for better nutrition), Mahidol University, 2019
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- Wassana Pookate, BS (Nutrition)

Graduated MS (Nutrition and Dietetics), Mahidol University, 2020

- Pathintip Sangsai, BS (Food)

Pass with condition MS (Toxicology and nutrition for food safety, Mahidol University)

### Research Experiences

#### 1. Innovation (Research and Development: R&D)

- Project manager: functional foods and medical foods for elderly and cancer patients
- Principal investigator: functional food to reduce carcinogen from alcohol drinking, smoking and meat processing
- Principal investigator: functional food to prevent sarcopenia and dysphagia in elderly
- Advisor: development of

#### 2. Clinical studies

- Safety and efficacy clinical trials of food products for cancer patients, elderly people and healthy volunteers (quality of life, tumor response, constipation and defecation, immune response, liver function, muscle health)
- Glycemic index identification by clinical trial
- Pharmacokinetic study of functional food and analysis of active compounds
- Measurement of taste thresholds using Filter Paper Disc method
- Observational studies: case-control and cohort studies
- Validation and Reliability tests of new assessment tools or new guidelines

#### 3. Chemical analyses

- Chemical and metabolite analysis of biological specimens using HPLC, LC-MS/MS, GC-MS
- Nutri-Metabolomic analysis

#### *In vivo* studies

- Orthotopic oral cancer xenograft model in mice
- Immunohistochemistry
- Tissue analysis for metabolic activity
- Efficacy study of anti-cancer agents in animal xenograft model of cancer
- Animal toxicity tests of food product according to OECD guideline

#### 4. *In vitro* studies

- Experiments using primary lymphocytes from leukemia patients and healthy volunteers
- Three-dimensional organotypic culture
- Cellular toxicity tests
- Molecular and biochemical techniques (flow cytometer, immunofluorescence, western blotting,



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RT-PCR, 2-D electrophoresis)

- Measurement of oxidative stress in cells, oxidative modification of protein, lipid, DNA
- Measurement of activities in glutathione antioxidant system
- Metabolism study (ATP generation and glycolysis)

### **Honor and Awards**

- 2021 Distinguished Teacher Award, Mahidol University
- 2021 Distinguished University Faculty, Institute of Nutrition, Mahidol University
- 2020 Distinguished Teacher Award, Institute of Nutrition, Mahidol University
- 2020 Major advisor of MU Outstanding Thesis Award, Mahidol University
- 2019 Major advisor of MU Outstanding Thesis Award, Mahidol University
- 2019 Malaspina International Scholar Travel (MIST) Award, ILSI Research Foundation, USA
- 2018 Distinguished University Faculty, Institute of Nutrition, Mahidol University
- 2017 Distinguished University Faculty, Institute of Nutrition, Mahidol University
- 2016 Ajinomoto Award for Outstanding Nutrition Research, Thailand Congress of Nutrition 2015  
First prize, Poster presentation, Annual conference of Society for Parenteral and Enteral Nutrition of Thailand (SPENT)
- 2011 Present to His Majesty the King Rama IX "Nutri-jelly- a novel food product for chewing and swallowing problem
- 2010 Best Dissertation Award from National Research Council of Thailand
- 2009 Trainee of the quarter award, MD Anderson cancer center, USA
- 2009 Second prize, Research presentation, IADR/APF, Wuhan, China
- 2008 President Research Scholar award, University of Texas, USA
- 2007 Lummis Family Fellowship, University of Texas, USA
- 2007 Best Poster in Toxicology and Pharmacology, National Student Research Forum, USA
- 2002 The recipient of Anandamahidol Scholarship (Dentistry)