

Institute of Nutrition, Mahidol University (INMU)

999 Phutthamonthon 4 Rd., Salaya, Phutthamonthon

Name Assistant Prof. Dr. Yuraporn Sahasakul E-mail address: yuraporn.sah@mahidol.edu Current position Lecturer, assistant professor

Education

| 2012 Ph.D. | (Applied Bioscience) | Hokkaido University, Sapporo, Japan |
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| 2009 M.S. | (Applied Bioscience) | Hokkaido University, Sapporo, Japan |
| 2007 B.Sc. | (Biotechnology) | Mahidol University, Bangkok, Thailand |

Research Interest and Expertise

1. Nutrient, Bioactive Compounds, and Health Benefits of plants/herbs/recipes

2. Diet-Related Non-Communicable Diseases (NCDs) using animal study and clinical study

3. Food and Nutritional Issues in National Level: iodized salt, drinking water, nutrition labeling, novel food

Research Experiences

Nutrient, Bioactive Compounds, and Health Benefits of plants/herbs/recipes

- 1. Nutrient and Non-nutrient Composition and properties in *Cyclea barbata Miers* leaves and aqueous extract from Ubon Ratchathani province
- 2. Nutritive Values, Bioactive Compounds and Antioxidant Activities of Mamuit (*Mangifera foetida sp*)
- **3.** Development of Healthy Tom Yum Flavored Rice Seasoning (Furikake) from Vegetable Powder
- **4.** Shelf Life Determination and Effect of Processing of Healthy Rice Seasoning (Furikake) from Vegetable Powder
- 5. Assess Antioxidant Effect of Tom Yum Flavored Rice Seasoning Vegetable Powder in Human Hepatocellular Carcinoma Cell Line (HepG2)
- 6. Total Phenolic Content and Antioxidant Activities of Durians in Thailand
- 7. Nutritional and Biochemical Quality of Date Palm Fruits in Thailand
- 8. Nutritive Values, Antioxidant Activities, and Inhibitory Properties of Tea Leaves



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- 9. Nutritive Values, Phenolics and Antioxidant Activities of Adenia viridiflora Craib
- **10.** Phenolics and In Vitro Health-Related Activities of Indigenous Plants in Kanchanaburi
- **11.** Phenolic Profiles and In Vitro Health-Related Properties of Sacha Inchi Leaves
- **12.** Nutritive values and bioactive compounds of legumes from Genebank Research and Development Group, Department of Agriculture (DOA), Thailand
- **13.** Development of *Hodgsonia heteroclita* (Roxb.) oil nanoemulsion and protein hydrolysate from its residual waste
- 14. Bioactive compound database of food resources in Thailand
- **15.** Nutritive values, bioactive compounds, and in vitro health properties of *Nephelium hypoleucum* Kurz.
- **16.** Effect of soil salinity on the nutritional value of certain types of rice

Animal research

- 1. Gastric Mucin Expression and Gastric Hormone Expression in Mice Fed Purified and Nonpurified diets
- 2. Effect of Purified and Nonpurified diets on Microbiota Alterations and Gastric Functions Changes in BALB/c Mice
- **3.** Gastric Emptying and Lactobacilli Colonization in Mice Fed Nonpurified Diet or Purified Diet Supplemented with or without Dietary Fiber
- **4.** Different impacts of purified and nonpurified diets on the microbiota and Toll-like receptors in mouse stomach
- 5. Effect of Brown Rice, Retrograded Brown Rice, Parboiled Germinated Brown Rice and Retrograded Parboiled Germinated Brown Rice on Colitis Induced by Dextran Sodium Sulfate (DSS) in Mice
- 6. Effect of Xylitol against Oral Cancer Xenograft Model
- **7.** Acute and Sub-chronic Oral Toxicity Testings of *Nelumbo nucifera* Extracts in Wistar Rats

Human research: Clinical study, Observational study

1. A Blinded Block-Randomized Placebo-Controlled Trial for Efficacy of a Fruit and Vegetable Juice (red grape, mulberry, beetroot) Mixed with Herbs on Liver



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Markers and Fatigue symptoms in Healthy Volunteers with Elevated Alanine Aminotransferase (ALT) Levels

2. Eating Behavior and Depression during early Coronavirus Disease (COVID-19) Pandemic among Undergraduate Students in Mahidol university

Food and Nutritional Issues in National Level

- 1. Survey and Development of Salt Producers for Subsidized Iodine Mixing Machine Policy
- 2. Development of QC and QA for Iodized Salt Learning Center at Bo-Kluea district, Nan Province
- **3.** Evaluation and development of salt producers after the lodine Mixing Machine Subsidization
- **4.** Monitoring and Evaluation on Iodized Salt Mixing Machines After 1 Year Subsidization
- 5. An Overview of Quality Analysis on Drinking Water in Sealed Containers, Ice Cubes, and Drinking Water from Water Vending Machines in Thailand
- 6. Nutrition labeling and Healthier choice
- 7. Sodium contribution in processed food

Training

2014 Workshop on "The Care and Practice Techniques for Laboratory Animal" by National Laboratory Animal Center, Mahidol University, March 20-21, 2014

Statistics for laboratory animal research, by National Research Council of Thailand (NRCT), and Office of National Standard for Research Animal (ONSRA), July 29-30, 2014



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2015 Workshop on "Handling and Basic Techniques in Mice" by the Laboratory Animal Science Unit, Faculty of Tropical Medicine, Mahidol University, August 31, 2015

Workshop on "Basic Mammalian Cell Culture" by Institute of Molecular Biosciences, Mahidol University, September 2, 7-8, 2015

Workshop on "Transformative Education and Active Learning" Institute for Innovative Learning, Mahidol University, September 16-18, 2015

Workshop on Writing a Great Paper and Getting it Published in a Research Journal, Elsevier Publishing Connect, November 27, 2015

Workshop and Exam for Animal Use License (U1-00246-2558)

2016 Author Workshop Program for Mahidol University: Springer Advance Expert Training, June 13-16, 2016

Training on Human Subject Protection in Biomedical Research, by Center of Ethical Reinforcement for Human Research, Mahidol University (MU-CERif), June 23, 2016

Nutrient Calculation and Nutrition Assessment Workshop using INMUcal-Nutrient Software, by Institute of Nutrition (INMU), Mahidol University, August 3-4, 2016

Workshop on Histopathological Techniques in Routine and Research V, Department of Pathobiology, Faculty of Science, Mahidol University, August 25-26, 2016

2017 Good Clinical Practice Training, Faculty of Medicine Ramathibodi Hospital, Mahidol University, August 22, 2017

> American Association for Laboratory Animal Science (AALAS) Learning Library Online Training, March 2016-February 2017

Workshop in Shelf life extension by FoSTAT, November 7-8, 2017



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2019 IACUC Training, Global Trends of Animal Welfare, Current Animal Models, and Research Animal Facility Design Trends and Current HVAC Issues, June 25-26, 2019

Multi Mentoring System (MMS) 2, April 29-May 1, 2019

Workshop in "Excellence in teaching and learning program" by Macquarie and Mahidol University, November 11-15, 2019

2020 Online Training: Publish & Flourish with Web of Science Journal Citation Reports and Endnote, Speaker: Dr. Nikita Agarwal (Solution Consultant), May 19, 2020

Human Subjects Research (Social & Behavioral & Humanities Researchers, Basic Stage), Collaborative Institutional Training Initiative Program (CITI PROGRAM), June 15, 2020

Online Training: Web of Science Webinar for Mahidol University, Speaker: Dju-Lyn Ching, Solution Consultant, Southeast Asia, Web of Science Group, July 15, 2020

Online Training: EndNote X9 Quick Start, Tips and Tricks - Mahidol University, Speaker: Dju-Lyn Chng, Solution Consultant, Southeast Asia, Web of Science Group, August 19, 2020

2021 Workshop in "Improving Online Teaching and Learning: Practical Workshop for Academics" by Macquarie and Mahidol University, June 16, 23, 30 and July 7, 2021

Working with the Institutional Animal Care and Use Committee (IACUC), CITI PROGRAM, October 8, 2021

Essentials for IACUC Members, CITI PROGRAM, October 11, 2021

Working with Mice in Research Settings (Working with Mice in Research), CITI PROGRAM, October 11, 2021



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2022 Assessment of Learning in the University University, Mahidol University Academic Development Program: MU-ADP#2: February 3, 2022

Mahidol University Professional Standard Framework level 2 (MUPSF#2), MU-ADP#2, April 18-22, 2022

Library Research Support Service for Meta Analysis & Systematic Review, MU Library Service, August 5, 2022

2023 Practical Training Program: Effective Development of Opinion Survey Questionnaires by Siriraj Health Science Education Excellence Center SHEE), May 26, 2023

Developing an effective written examination, Mahidol University Academic Development Program: MU-ADP#3, June 8, 2023

Mahidol University Head of Department Development Program: MU-HDP#8, June 9-28, 2023

Workshop on Tracking Live Tumor Cells in Mice using Bioluminescence Signals by Department of Physiology and Central Animal Facility (CAF) Advanced in Vivo Imaging Center, Faculty of Science, Mahidol University, July 25-26, 2023

Standford Introduction to Food and Health, Stanford University, Coursera, August 9, 2023

Giving Helpful Feedback, University of Colorado Boulder, Coursera, September 4, 2023

Human Subjects Research (Biomedical Researchers), CITI PROGRAM, September 6, 2023

Good Clinical Practice (Researcher Biological), CITI PROGRAM, September 15, 2023



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Publications

National level

- Sahasakul Y, Thiyajai P, Kriengsinyos W, Charoenkiatkul S. Nutrients and phenolic acids in Krung badan (Cyclea barbata Miers) leaves and aqueous extract from Ubon Ratchathani province. Journal of Science & Technology, Ubon Ratchathani University. 2015;17:2:1-8.
- Khemthong C, Luangpituksa P*, Sahasakul Y. Monitoring the iodine levels in the 14 selected small-scale iodized salt processing plants in the Bangkok metropolitan area. Proceeding of Thai Society for Biotechnology and International Conference 2015. November 17-20, 2015 Mandarin Hotel Bangkok by Centre Point, Bangkok, Thailand.
- **3.** Winuprasith T*, **Sahasakul Y**, Rungraung N. Nanocellulose: Food Application and Food Safety Aspects. Thai Journal of Toxicology. 2017;32:1:67-79.
- Kaewsritho, P., On-Nom, N., Suttisansanee, U., Winuprasith, T., Chamchan, R., Sriden, N., Aursalung, A. and Sahasakul, Y.*. Development of Healthy Tom Yum Flavored Rice Seasoning (Furikake) from Vegetable Powder. Agricultural Sci. J.2018;49(2) Suppl: 165-168.
- Chimkerd, C., Rungraung, N., Thiyajai, P., Purttiponthanee, S., Sahasakul, Y., Trachootham, D., Winuprasith, T.* Formulation of vegetable pudding for elderly and their storage effect on total phenolics and antioxidant activities. Journal of Science and Technology Srinakharinwirot University. 2019; 11: 21: 64-76.
- Khongphakdee P, Sahasakul Y, On-nom N, Temviriyanukul P, Suwonsichon S, Vorakuldumrongchai S, Chusri O, Chatbanyong R and Suttisansanee U. Antioxidant activity and total phenolic contents of sequentially organic solvent extracted durian fruits. The 50th National Graduate Research Conference, Bangkok, Thailand. June 2020
- Khongphakdee P, Sahasakul Y, On-nom N, Temviriyanukul P, Suwonsichon S, Vorakuldumrongchai S, Chusri O, Chatbanyong R and Suttisansanee U. Water based extraction conditions via total phenolic content and antioxidant activities of durian. International Conference on Food and Applied Bioscience 2020, Chiang Mai, Thailand. February 2020
- Hinkaew J, Sahasakul Y, Tangsuphoom N, Sritalahareuthai V and Suttisansanee U. Volatile compounds in date palm fruit (*Phoenix dactylifera L.*): The comparison between flesh and seed. International Conference on Food and Applied Bioscience 2020, Chiang Mai, Thailand. February 2020





International level

- Fujiwara R, Sasajima N, Takemura N, Ozawa K, Nagasaka Y, Okubo T, Sahasakul Y, Watanabe J, Sonoyama K. 2,4-dinitrofluorobenzene-induced contact hypersensitivity response in NC/Nga mice fed fructo-oligosaccharide. J Nutr Sci Vitaminol. 2010;56:260-65.
- 2. Sahasakul Y, Takemura N, Sonoyama K. Different impacts of purified and nonpurified diets on the microbiota and Toll-like receptors in mouse stomach. Biosci Biotechnol Biochem. 2012;76:1728-32.
- **3. Sahasakul Y**, Takemura N, Sonoyama K. Gastric emptying is involved in Lactobacillus colonisation in mouse stomach. Br J Nutr. 2014; 112:408-15.
- 4. Praengam K, Sahasakul Y, Kupradinun P, Sakarin S, Sanitchua W, Rungsipipat A, Rattanapinyopituk K, Angkasekwinai P, Changsri K, Mhuantong W, Tangphatsornruang S, Tuntipopipat S. Brown rice and retrograded brown rice alleviate inflammatory response in dextran sulfate sodium (DSS)-induced colitis mice. Food and Function. 2017;8:4630-4643.
- 5. Hinkaew J, Sahasakul Y, Tangsuphoom N and Suttisansanee U. The effect of cultivar variation on total phenolic contents and antioxidant activities of date palm fruit (*Phoenix dactylifera L.*). Current Research in Nutrition and Food Science. 2020; 8(1): 155-163.
- Chupeerach C, Aursalung A, Watcharachaisoponsiri T, Whanmek K, Thiyajai P, Yosphan K, Sritalahareuthai V, Sahasakul Y, Santivarangkna C, Suttisansanee U. The Effect of Steaming and Fermentation on Nutritive Values, Antioxidant Activities, and Inhibitory Properties of Tea Leaves. Foods. 2021 Jan 8;10(1):117. doi: 10.3390/foods10010117. PMID: 33429899; PMCID: PMC7827290.
- Hinkaew J, Aursalung A, Sahasakul Y, Tangsuphoom N, Suttisansanee U. A Comparison of the Nutritional and Biochemical Quality of Date Palm Fruits Obtained Using Different Planting Techniques. Molecules. 2021;26(8):2245
- Wannasaksri W, Temviriyanukul P, Aursalung A, Sahasakul Y, Thangsiri S, Inthachat W, On-Nom N, Chupeerach C, Pruesapan K, Charoenkiatkul S, Suttisansanee U. Influence of Plant Origins and Seasonal Variations on Nutritive Values, Phenolics and Antioxidant Activities of Adenia viridiflora Craib., an Endangered Species from Thailand. Foods. 2021; 10(11):2799. https://doi.org/10.3390/foods10112799
- Sirichai P, Kittibunchakul S, Thangsiri S, On-Nom N, Chupeerach C, Temviriyanukul 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. https://doi.org/10.3390/plants11030294



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- Sahasakul Y, Angkhasirisap W, Lam-ubol A, Aursalung A, Sano D, Takada K, Trachootham D. Partial Substitution of Glucose with Xylitol Prolongs Survival and Suppresses Cell Proliferation and Glycolysis of Mice Bearing Orthotopic Xenograft of Oral Cancer. Nutrients. 2022; 14(10):2023. https://doi.org/10.3390/nu14102023
- 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. https://doi.org/10.3390/plants11111515
- Sahasakul Y, Aursalung A, Thangsiri S, Wongchang P, Sangkasa-Ad P, Wongpia A, Polpanit A, Inthachat W, Temviriyanukul P, Suttisansanee U. Nutritional Compositions, Phenolic Contents, and Antioxidant Potentials of Ten Original Lineage Beans in Thailand. Foods. 2022 Jul 12;11(14):2062. doi: 10.3390/foods11142062. PMID: 35885307; PMCID: PMC9324593.
- Chupeerach C, Temviriyanukul P, Thangsiri S, Inthachat W, Sahasakul Y, Aursalung A, Wongchang P, Sangkasa-Ad P, Wongpia A, Polpanit A, Nuchuchua O, Suttisansanee U. Phenolic Profiles and Bioactivities of Ten Original Lineage Beans in Thailand. Foods. 2022 Dec 3;11(23):3905. doi: 10.3390/foods11233905. PMID: 36496713; PMCID: PMC9738633.
- Piseskul J, Suttisansanee U, Chupeerach C, Khemthong C, Thangsiri S, Temviriyanukul P, Sahasakul Y, Santivarangkna C, Chamchan R, Aursalung A, On-Nom N. Optimization of Enzyme-Assisted Mechanical Extraction Process of Hodgsonia heteroclita Oilseeds and Physical, Chemical, and Nutritional Properties of the Oils. Foods. 2023 Jan 8;12(2):292. doi: 10.3390/foods12020292. PMID: 36673384; PMCID: PMC9858557.
- Gao Y, Kriengsinyos W, Sahasakul Y, Phansuea P. Development of Low-Fat Pamphlets Based on the Transtheoretical Model for Ischemic Stroke Patients. Malaysian Journal of Medicine and Health Sciences. 2023, 19, pp. 101 – 102.
- **16.** Lwin KZ, Kriengsinyos W, **Sahasakul Y**, Tapanee P. Evaluation of Nutritive Value of Commercially Packaged Snacks Available in Thai Supermarkets. Malaysian Journal of Medicine and Health Sciences. 2023, 19, pp. 97 98.
- Luu LK, Thangsiri S, Sahasakul Y, Aursalung A, Inthachat W, Temviriyanukul P, On-Nom N, Chupeerach C, Suttisansanee U. Nutrients, Phytochemicals and In Vitro Disease Prevention of Nephelium hypoleucum Kurz Fruit. Nutrients. 2023 Feb 14;15(4):950. doi: 10.3390/nu15040950. PMID: 36839313; PMCID: PMC9960393.



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- On-Nom N, Thangsiri S, Inthachat W, Temviriyanukul P, Sahasakul Y, Chupeerach C, Pruesapan K, Trisonthi P, Siriwan D, Suttisansanee U. Seasonal Effects on Phenolic Contents and In Vitro Health-Promoting Bioactivities of Sacred Lotus (Nelumbo nucifera). Plants (Basel). 2023 Mar 24;12(7):1441. doi: 10.3390/plants12071441. PMID: 37050065; PMCID: PMC10097295.
- Suttisansanee U, Thiyajai P, Inthachat W, Pruesapan K, Wongwathanarat K, Charoenkiatkul S, Sahasakul Y, Temviriyanukul P. Exploration of the nutritional and carotenoids profiles of vegetables in Thai cuisine as potential nutritious ingredients. Heliyon. 2023 Apr 29;9(5):e15951. doi: 10.1016/j.heliyon.2023.e15951. PMID: 37205996; PMCID: PMC10189170.
- Sahasakul Y, Amonsusawat N, Phansuea P. Lifestyles, Food Consumption Frequencies, and Eating Behaviors among Three Main Disciplines of Undergraduate Students during the Early COVID-19 Outbreak in Thailand. Nutrients. 2023 Jun 16;15(12):2765. doi: 10.3390/nu15122765. PMID: 37375675; PMCID: PMC10304545.
- On-Nom N, Promdang P, Inthachat W, Kanoongon P, Sahasakul Y, Chupeerach C, Suttisansanee U, Temviriyanukul P. Wolffia globosa-Based Nutritious Snack Formulation with High Protein and Dietary Fiber Contents. Foods. 2023 Jul 9;12(14):2647. doi: 10.3390/foods12142647. PMID: 37509739; PMCID: PMC10379182.
- 22. Sahasakul Y, Aursalung A, Thangsiri S, Temviriyanukul 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 Jul 28;12(15):2870. doi: 10.3390/foods12152870. PMID: 37569139; PMCID: PMC10417330.
- Inthachat W, Thangsiri S, Khemthong C, On-Nom N, Chupeerach C, Sahasakul Y, Temviriyanukul P, Suttisansanee U. Green Extraction of Hodgsonia heteroclita Oilseed Cake Powder to Obtain Optimal Antioxidants and Health Benefits. Foods. 2023; 12(23):4281. https://doi.org/10.3390/foods12234281