

Institute of Nutrition, Mahidol University (INMU)

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Name E-mail address Current position	Uthaiwan Suttisansanee uthaiwan.sut@mahidol.ac.th Associate Professor
Education	
2011	Doctoral of Philosophy (Biochemistry/Chemistry), University of
	Waterloo, Canada
2006	Master of Science (Biochemistry/Chemistry), University of
	Waterloo, Canada
2004	Bachelor of Science (Hons.) (Specialist in Biochemistry, minors in
	Chemistry and Mathematics), University of Toronto, Canada

Research Interest and Expertise

- Natural product and functional foods
- Phytochemicals
- Enzymology and disease prevention
- In vitro health related activities

Research Experiences

- 1. Nutritive values and health properties of common vegetables and herbs in Thai cuisine
- 2. The investigation of biochemical properties against some non-communicable diseases from Noinakreua (*Kadsura* spp.)" in "The investigation of nutritive values, bioactive compounds, biochemical properties against some non-communicable diseases and product development from different parts of Noinakreua (*Kadsura* spp.)"
- 3. The investigation of flavonoids against diabetes mellitus targeting alpha-glucosidase
- 4. The database development of nutritive values, bioactive compounds and functional properties of edible mushroom in Amnat Charoen province
- 5. The investigation on anti-Alzheimer's disease from *Gynura procumbens* and *Gynura divaricata* leave extracts
- 6. "Effect of *Anoectochilus burmannicus* extract against obesity and diabetes" in "Propagation and research on biological activities of *Anoectochilus burmannicus* and development as functional products to serve the plant genetic conservation project under the royal initiative of Her Royal Highness Princess Maha Chakri Sirindhorn"
- 7. The investigation of biochemical properties against chronic diseases of King Rice Bran powder and the study of health benefits on King Rice Bran powder consumption
- 8. Anti-oxidant and anti-Alzheimer potential of spirulina extract for application as a potential functional ingredient
- 9. Antimutagenic and cancer chemopreventive activities of Thai fruits
- 10. Development of mango jelly product to improve health benefits for elderly
- 11. Development of healthy instant brown rice flour dumpling in cereal cream
- 12. Nutritional utilization of Sacha Inchi (Plukenetia volubilis L.) oil cake
- 13. The investigation of biochemical properties against enzyme activities from *Capsicum* species
- 14. Biochemical properties of *Capsicum* species against key enzymes relevant to some non-communicable diseases



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- 15. Biological functions of legume extracts against some key enzymes that control noncommunicable diseases
- 16. The investigation of antioxidant and anti-Alzheimer properties in *Pandanusamaryfollious* leaves
- 17. "The investigation of biochemical properties against chronic diseases of crude extract from indigenous plants" in "Health benefit, food safety and product development of local plants at conserved area of Plant Genetic Conservation Project under the Royal Initiative of Her Royal Highness Princess Maha Chakri Sirindhorn, Kanchanaburi Province"
- 18. "The health benefit of parboiled germinated brown rice against kidney, heart and brain damage of hypertensive induced rat" in "Nutrition and health benefits of parboiled germinated brown rice (KDML 105)"
- 19. "In vitro screening of lipase inhibitory activity and study of potential anti-Alzheimer's disease from parboiled germinated brown rice" in "Nutrition and health benefits of parboiled germinated brown rice (KDML 105)"
- 20. The investigation on biochemical properties against some non-communicable diseases of *Gynura divaricata* and *Gynura procumbens* leaves
- 21. Antioxidant and enzyme inhibitory activities of Thai herbal teas in comparison to conventional teas (*Camellia sinensis*)
- 22. The discovery of sweet protein or sweet-modifying protein from *Phyllanthus emblica* Linn
- 23. Investigation of the Mycobial Glyoxalase System
- 24. Biochemistry in Bacterioferritin
- 25. Protein engineering and structural investigation of green fluorescence protein

Publications

National

- 1. Choichuedee P, **Suttisansanee U**, Hudthagosol C and Somboonpanyakul P. Mango puree for elderly with dysphagia. Agricultural Sci J. 2018; 49(2)(Suppl.): 33-36.
- 2. 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.
- **3.** Promyos N, Temviriyanukul P and **Suttisansanee U**. Evaluation of α-glucosidase inhibitory assay using different sub-classes of flavonoids. Current Applied Science and Technology Journal. 2017; 17(2): 172-180.
- Pongkunakorn T, Watcharachaisoponsiri T, Chupeerach C, On-nom N and Suttisansanee U. Total phenolic contents and antioxidant activities of Thai local mushrooms. Current Applied Science and Technology Journal. 2017; 17(2): 181-190.
- 5. Watcharachaisoponsiri T, Thiyajai P, Charoenkiatkul S, Temviriyanukul P, Chupeerach C and Suttisansanee U. The screening of anti-lipase activity in Thai local chili peppers. Thai Journal of Toxicology. 2017; 32(1): 35-51.
- 6. Pongkunakorn T and Suttisansanee U. Total phenolic contents and antioxidant activities of Thai local mushrooms. Agricultural Sci J. 2016, 47(2)(Suppl.): 401-404.
- **7.** Tasiri P, **Suttisansanee U**, Hudthagosol C and Somboonpanyakul P. Development of riceberry rice vegan jelly contains high protein and high energy for the elderly with dysphagia. Agricultural Sci J. 2015; 46(3)(Suppl.): 369-372.



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- 8. Tonglim J, Kittibunchakul S, Kriengsinyos W, Kettawan A and Suttisansanee U. Comparative study on anti-hypertension potential of Thai herbal tea and conventional tea (*Camellia sinensis*). Agricultural Sci J. 2015; 46(3)(Suppl.): 13-16.
- **9.** Thatsanasuwan N, Chupeerach C, Kriengsinyos W and **Suttisansanee U**. The investigation on antioxidant activities of *Pandanus amaryllifolius* leaves extracted under different extraction conditions. Food and Applied Bioscience Journal. 2015; 3(2): 130-136.
- **10.** Thuphairo K, Kruawan K, Srichamnong W, Charoenkiatkul S and **Suttisansanee U**. Anti-acetylcholinesterase properties of sweet pepper (*Capsicum annuum*) extracts in different solvents. Agricultural Sci J. 2014; 45(2)(Suppl.): 121-124.
- 11. Nantakornsuttanan N, Phanyotha T, Thuphairo K, Charoenkiatkul S and **Suttisansanee U**. Antioxidant activities and total phenolic contents from different varieties of chili peppers extracts. Agricultural Sci J. 2014; 45(2)(Suppl.): 365-368.
- 12. Sornchan P, Kruawan K, Srichamnong W, Charoenkiatkul S and Suttisansanee U. *In vitro* alpha-glucosidase inhibitory activity of sweet pepper extracted using different solvents. Agricultural Sci J. 2014; 45(2)(Suppl.): 81-84.
- **13.** Watcharachaisoponsiri T, Sornchan P, Charoenkiatkul S and **Suttisansanee U**. Lipase Inhibitory activity from different chili pepper extracts. Agricultural Sci J. 2014; 45(2)(Suppl.): 361-364.
- 14. Phanyotha T, Srichamnong W, Santivarangkna C, Tangsuphoom N and **Suttisansanee U**. Anti-acetylcholinesterese activities from *Gynura procumbens* leaves extracted using response surface methodology. Agricultural Sci J. 2014; 45(2)(Suppl.): 17-20.
- **15.** Chutipanyaporn P, Kruawan K, Chupeerach C, Santivarangkna C and **Suttisansanee U**. The investigation on α -glucosidase inhibitory from legume extracts. Agricultural Sci J. 2014; 45(2)(Suppl.): 133-136.
- **16. Suttisansanee U**, Sornchan P and Kruawan K. Potential diabetes prevention through key enzymes inhibition of edible sour leaves from Thai local plants. Agricultural Sci J. 2014; 45(2)(Suppl.): 13-16.
- **17.** Tantivirasut P, Laohakunjit N, **Suttisansanee U**, Huadthagosol C and Somboonpanyakul P. Effect of pregelatinized priceberry flour for reducing fat in salad dressing. Agricultural Sci J. 2014; 45(2)(Suppl.): 125-128.
- **18.** Thuphairo K and **Suttisansanee U**. Sweet pepper and health promoting compounds. Journal of Nutrition Association of Thailand. 2014; 48(2): 1-11
- **19.** Chutipanyaporn P, Kruawan K, Chupeerach C, Santivarangkna C and **Suttisansanee U**. The effect of cooking process on antioxidant activities and total phenolic compounds of five colored beans. Food and Applied Bioscience Journal. 2014; 2(3): 183-191.
- **20.** Wonglao K, Srichamnong W, Hudthagosol C, **Suttisansanee U** and Somboonpanyakul P. Effect of particle size of Sinlek brown rice flour as a partially substituent of wheat flour on biscuits quality. Agricultural Sci J. 2013; 44(2)(Suppl): 181-184.
- **21.** Chuaykarn N, Laohakunjit N, **Suttisansanee U**, Hudthagosol C and Somboonpanyakul P. Effect of riceberry flour on physico-chemical and sensory properties of low fat ice cream. Agricultural Sci J. 2013; 44(2)(Suppl): 589-192.
- **22. Suttisansanee U** and Kruawan K. Anti-lipase activities in edible sour leaves of Thai local plants. Agricultural Sci J. 2013; 44(2)(Suppl): 604-606.
- **23.** Phanyotha T, Tangsuphoom N, Santivarangkna C and **Suttisansanee U**. Optimization of extraction conditions for antioxidant activity from *Gynura procumbens* leaf using response surface methodology. Agricultural Sci J. 2013; 44(2)(Suppl): 409-412





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- 24. Sornchan P, Kruawan K, Srichamnong W, Charoenkiatkul S and Suttisansanee U. Anti-lipase activity of sweet pepper extracted from different solvents. Agricultural Sci J. 2013; 44(2)(Suppl): 610-612
- **25.** Thuphairo K, Kruawan K, Srichamnong W, Charoenkiatkul S and **Suttisansanee U**. The investigation of total phenolic compounds and antioxidant activities of sweet pepper (*Capsicum annuum*) extracted by solvents with different polarities. Agricultural Sci J. 2013; 44(2)(Suppl): 293-296
- 26. Thatsanasuwan N, Chupeerach C, Kriengsinyos W and Suttisansanee U. The investigation of anti-acetylcholinesterase activity from *Pandanus amaryllifolius* leaf extract. Agricultural Sci J. 2013; 44(2)(Suppl): 413-416
- 27. Tantivirasut P, Laohakunjit N, Suttisansanee U, Hudthagosol C and Somboonpanyakul P. Effect of extrusion on total phenolic content, antioxidant activities and physical properties of pregelatinized rice berry flour. Agricultural Sci J. 2013; 44(2)(Suppl): 205-208
- **28.** Tonglim J and **Suttisansanee U**. Tea and health promotion. Journal of Nutrition Association of Thailand. 2012; 47(2): 15-27

International

- Kemsawasd V, Inthachat W, Suttisansanee U, Temviriyanukul P. 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. 2020; 23(3): 1801. <u>https://doi.org/10.3390/ijms23031801</u>
- 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: 294. https://doi.org/10.3390/plants11030294
- Kunkeaw T, Suttisansanee U, Trachootham D, Karinchai J, Chantong B, Potikanond S, Inthachat W, Pitchakarn P, Temviriyanukul P. Reduction of amyloid beta accumulation through suppression of BACE-1 activities by *Diplazium esculentum* (Retz.) Sw. in *Drosophila* models of Alzheimer's disease. Scientific Reports. 2021; 11(1): 23796.
- 4. Wannasaksri W, Temviriyanukul P, Aursalung A, Sahasakul Y, Thangsiri S, Inthachat W, On-Nom N, Chupeerach C, Pruesapan K, Charoenkiatkul S and 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: 2799. https://doi.org/10.3390/foods10112799
- Chupeerach C, Cho EM, Suttisansanee U, Chamchan R, Khemthong C and On-nom N. Reducing calories, fat, saturated fat and sodium in Myanmar recipes: Effect on consumer acceptance. NFS Journal. 2021. 25: 51-55. https://doi.org/10.1016/j.nfs.2021.11.001
- 6. Temviriyanukul P, Kittibunchakul S, Trisonthi P, Inthachat W, Siriwan D and Suttisansanee U. Analysis of phytonutrients, anti-mutagenic and chemopreventive effects of tropical fruit extracts. Foods. 2021; 10: 2600. https://doi.org/10.3390/foods10112600



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- 7. Kittibunchakul S, Yuthaworawit N, Whanmek K, Suttisansanee U and 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 Food. 2021; 86: 104710. https://doi.org/10.1016/j.jff.2021.104710
- Ting P, Srinuanchai W, Suttisansanee U, Tuntipopipat S, Charoenkiatkul S, Praengam K, Chantong B, Temviriyanukul P and Nuchuchua O. Development of chrysin loaded oil-in-water nanoemulsion for improving bioaccessibility. Foods. 2021; 10: 1912. Doi: 10.3390/foods10081912
- 9. Suttisansanee U, Thiyajai P, Chalermchaiwat P, Wongwathanarat K, Pruesapan K, Charoenkiatkul S and Temviriyanukul P. Phytochemicals and in vitro bioactivities of aqueous ethanolic extracts from common vegetables in Thai food. Plants. 2021; 10(8): 1563. Doi: 10.3390/plants10081563
- Hinkaew J, Aursalung A, Sahasakul Y, Tangsuphoom N and Suttisansanee U. A comparison of nutritional and biochemical quality of date palm fruits obtained from different planting techniques. Molecules. 2021; 26(8): 2245. Doi: 10.3390/molecules26082245
- **11. Suttisansanee U**, Pitchakarn P, Ting P, Inthachat W, Thiyajai P, Rodthayoy D, Karinchai J, Chanatarasuwan B, Nuchuchua O and Temviriyanukul P. Health promoting bioactivity and in vivo genotoxicity evaluation of a hemiepiphyte fig, *Ficus dubia*. Food Science and Nutrition. 2021; 9: 2269-2279. Doi: 10.1002/fsn3.2205
- Wannasaksri W, On-Nom N, Chupeerach C, Temviriyanukul P, Charoenkiatkul S and Suttisansanee U. In vitro phytotherapeutic properties of aqueous extracted Adenia viridiflora Craib. towards civilization diseases. Molecules. 2021; 26: 1082. doi: 10.3390/molecules26041082
- **13.** Srinuanchai W, Nooin R, Pitchakarn P, Karinchai J, **Suttisansanee U**, Chansriniyom C, Jarussophon S, Temviriyanukul P and Nuchuchua O. Inhibitory effects of *Gymnema inodorum* (Lour.) Decne leaf extracts and its triterpene saponin on carbohydrate digestion and intestinal glucose absorption. Journal of Ethnopharmacology. 2021; 266: 113398. doi: 10.1016/j.jep.2020.113398
- 14. Chupeerach C, Aursalung A, Watcharachaisoponsiri T, Whanmek K, Thiyajai P, Yosphan K, Sritalahareuthai V, Sahasakul Y, Santivarangkna C and Suttisansanee U. The effect of steaming and fermentation on nutritive values, antioxidant activities, and inhibitory properties of tea leaves. Foods. 2021; 10(1): 117. Doi: 10.3390/foods10010117
- **15.** Kaewmak N, Chupeeruch C, **Suttisansanee U**, Siriwan D, Chamchan R, Khemthong C, On-Nom N. Production and quality evaluation of low glycemic index crispy waffle from whole wheat flour supplemented with type 4-resistant starch and sacred lotus stamen. Food Research 4 (Suppl.4). 2020; 1-8.
- **16.** Gunyaphan S, On-Nom N, **Suttisansanee U**, Siriwan D, Chamchan R, Khemthong C, Chupeeruch C. Product qualities and sensory evaluation of high protein snack bar incorporated with pea protein isolate. Food Research 4 (Suppl.4). 2020; 51-55.
- **17.** Khemthong C, Chamchan R, **Suttisansanee U**, Charoenkiatkul S, Chupeerach C and On-nom N. Development of healthy snack from Sa-med mushroom (*Boletus griseipurpureus Corner*). Walailak Journal of Science and Technology. 2020; 19: 18(1).
- **18.** Promyos N, Temviriyanukul P and **Suttisansanee U**. Investigation of anthocyanidins and anthocyanins for targeting α -glucosidase in diabetes mellitus. Preventive Nutrition and Food Science. 2020; 25(3): 263-271.



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- **19.** Sritalahareuthai V, Temviriyanukul P, On-nom N, Charoenkiatkul S and **Suttisansanee U**. Phenolic profiles, antioxidant, and inhibitory activities of *Kadsura heteroclita* (roxb.) Craib and *Kadsura coccinea* (Lem.) A.C. Sm. Foods. 2020; 9(9): 1222. doi: 10.3390/foods9091222
- **20.** Temviriyanukul P, Sritalahareuthai V, Promyos N, Thangsiri S, Pruesapan K, Srinuanchai W, Nuchuchua O, Siriwan D, On-nom N and **Suttisansanee U**. The effect of sacred lotus (*Nelumbo nucifera*) and its mixtures on phenolic profiles, antioxidant activities, and inhibitions of the key enzymes relevant to Alzheimer's disease. Molecules. 2020; 25(16): 3713. doi: 10.3390/molecules25163713
- 21. Sritalahareuthai V, Aursalung A, On-nom N, Temviriyanukul P, Charoenkiatkul S and **Suttisansanee U**. Nutritional composition of conserved *Kadsura* spp. plants in Northern Thailand. Heliyon. 2020. doi:10.1016/j.heliyon.2020.e04451
- 22. On-nom N, Suttisansanee U, Tongmai J, Khemthong C, Chamchan R, Prangthip P, Hanboonkunupakarn B and Chupeerach C. Consumption of anthocyanin-rich mulberry fruit jelly with a high-fat meal decreases postprandial serum cardiometabolic risk factors in dyslipidemia subjects. Journal of Nutrition and Metabolism. 2020. doi:10.1155/2020/1370951
- 23. Temviriyakul P, Sritalahareuthai V, Na Jom K, Jongruaysup B, Tabtimsri S, Pruesapan K, Thangsiri S, Inthachat W, Siriwan D, Charoenkiatku S and Suttisansanee U. Comparison of phytochemicals, antioxidant, and in vitro anti-Alzheimer properties of twenty-seven *Morus* spp. cultivated in Thailand. Molecules. 2020; 25(11): 2600. doi:10.3390/molecules25112600
- 24. Suttisansanee U, Charoenkiatkul S, Jongruaysup B, Tabtimsri S, Siriwan D and Temviriyanukul P. Mulberry fruit cultivar 'Chiang Mai' prevents beta-amyloid toxicity in PC12 neuronal cells and in a *Drosophila* model of Alzheimer's disease. Molecules. 2020; 25(8): 1837. doi:10.3390/molecules25081837
- **25.** 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.
- **26.** Choichuedee P, **Suttisansanee U**, Hudthagosol C and Sanporkha P. Sweet sticky rice puree diet for elderly with dysphagia. Walailak Journal of Science and Technology. 2020; 17(1): 47-54.
- 27. Naprasert J, Suttisansanee U and Kemsaward V. Single and mixed lactic acid bacteria culture fermentation in red bean milk for development of a functional beverage. Malaysian Applied Biology. 2019; 48(4): 1-7.
- **28.** Thuphairo K, Sornchan P and **Suttisansanee U**. Bioactive compounds, antioxidant activity and inhibition of key enzymes relevant to Alzheimer's disease from sweet pepper (*Capsicum annuum*) extracts. Preventive Nutrition and Food Science. 2019; 24(3): 327-337.
- **29.** Suttisansanee U and Honek JF. Preliminary characterization of a Ni²⁺-activated and mycothiol-dependent glyoxalase I enzyme from *Streptomyces coelicolor*. Inorganics. 2019; 7(8): 99-116.
- **30.** Suttisansanee U, KunKeaw T, Thatsansasuwan N, Tonglim J and Temviriyanukul P. The investigation on cholinesterase and BACE1 inhibitory activities in various tea infusions. Walailak Journal of Science and Technology. 2019; 16(3): 155-163.
- **31.** Suttisansanee U and Kruawan K. *In vitro* anti-Alzheimer's disease in edible sour leaves of Thai local plants. Walailak Journal of Science and Technology. 2019; 16(3): 165-174.



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- 32. Chamchan R, Charoenkiatkul S, Thiyajai P, Suwanwattana W, Suttisansanee U, Srichamnong W and On-nom N. Development of dried chili paste from local herbs at a conserved area of Plant Genetic Conservation Project under the Royal Initiative of Her Royal Highness Princess Maha Chakri Sirindhorn, Kanchanaburi Province. Walailak Journal of Science and Technology. 2019; 16(5): 361-368.
- **33.** Chupeerach C, Yothakulsiri C, Chamchan R, **Suttisansanee U**, Sranacharoenpong K, Tungtrongchitr A and On-Nom N. The Effect of coconut jelly with stevia as a natural sweetener on blood glucose, insulin and C-peptide responses in twelve healthy subjects. Recent Patents on Food, Nutrition & Agriculture. 2018; 9(2): 127-133.
- **34.** Kukreja RK, Sripum C, Charoenkiatkul S, Kriengsinyos W and **Suttisansanee U**. Evaluation of ethanol concentration, temperature and shaking time of extracted Thai Jasmine rice on cholinesterase enzyme activity. International Food Research Journal. 2018; 25(1): 227-233
- **35.** Pongkunakorn T, Watcharachaisoponsiri T, Chupeerach C, On-nom N and **Suttisansanee U**. Inhibitions of Key Enzymes Relevant to Obesity and Diabetes of Thai Local Mushroom Extracts. Current Applied Science and Technology. 2017; 17(2): 181-190.
- **36.** Promyos N, Temviriyanukul P and **Suttisansanee U**. Evaluation of α-glucosidase inhibitory assay using different sub-classes of flavonoids. Current Applied Science and Technology. 2017; 17(2): 172-180.
- 37. Sripum C, Kukreja RK, Charoenkiatkul S, Kriengsinyos W and Suttisansanee U. The effect of extraction conditions on antioxidant activities and total phenolic contents of different processed Thai Jasmine rice. International Food Research Journal. 2017; 24(4): 1644-1650
- **38.** Suttisansanee U and Honek JF. Hydroxamate Inhibitor Profiling of Both Zn²⁺- and Ni²⁺-Activated Glyoxalase I Metalloenzymes Having Diverse Quaternary Structures. Letters in Drug Design & Discovery. 2017. 14(7): 843-852
- **39.** Kittibunchakul S, Thiyajai P, **Suttisansanee U** and 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
- **40.** Chupeerach C, **Suttisansanee U**, On-nom N and Kriengsinyos W. Impact of genetic polymorphism on LDL-C response to plant stanol ester intake. Journal of the Medical Association of Thailand. 2016. 99(6): 723-731.
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 U. Anti-acetylcholinesterase inhibitory activities of different varieties of chili peppers extracts. International Food Research Journal. 2016; 23(5): 1953-1959
- **42.** Watcharachaisoponsiri T, Sornchan P, Charoenkiatkul S and **Suttisansanee U**. The α-glucosidase inhibitory activity from different chili pepper extracts. International Food Research Journal. 2016; 23(4): 1439-1445
- **43.** Sripum C, Kukreja RK, Charoenkiatkul S, Kriengsinyos W and **Suttisansanee U**. The effect of storage time on antioxidant activities and total phenolic contents of parboiled germinated brown rice (Khao Dok Mali 105). International Food Research Journal. 2016; 23(4): 1827-1831
- **44. Suttisansanee U**, Ran Y, Mullings KY, Sukdeo N and Honek JF. Modulating Glyoxalase I Metal Selectivity by Deletional Mutagenesis: Underlying Structural Factors Contributing to Nickel Activation Profiles. Metallomics. 2015; 7(4): 605-612.
- **45.** Bythell-Douglas R, **Suttisansanee U**, Flematti GR, Challenor M, Lee M, Panjikar S, Honek JF and Bond CS. The crystal structure of a homodimeric Pseudomonas glyoxalase I enzyme reveals asymmetric metallation commensurate with half-of-sites activity. Chemistry A European Journal. 2014; 21(2): 541-544



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- **47. Suttisansanee U**, Lau K, Lagishetty S, Rao KN, Swaminathan S, Sauder JM, Burley SK and Honek JF. Investigation on the Metalloenzyme Glyoxalase I from *Clostridium acetobutylicum*. Journal of Biological Chemistry. 2011; 286(44): 38367-38374.
- **48. Suttisansanee U** and Honek JF. Bacterial glyoxalase enzymes. Seminars in Cell and Developmental Biology. 2011; 22(3): 285-292