Curriculum Vitae

Prempree Sutthasupha, Ph.D.

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Chiang Mai University
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EDUCATION

2018-2025	Doctor of Philosophy Program in Physiology, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2014-2018	Bachelor of Science Program in Physical Therapy, Second Class Honor, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand

HONORS AND AWARDS

2019-2024	Scholarship of the Royal Golden Jubilee (RGJ) Ph.D. Program (NRCT5-RGJ63004-078/ PS and AL), National Research Council of Thailand (NRCT)
2018	Bachelor of Science Program in Physical Therapy, Second Class Honor, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand
2015	Certificate of Academic Excellence, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand

2014	Certificate of Academic Excellence, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand
2014-2017	Scholarship of the Japanese Chamber of Commerce-Bangkok

RESEARCH FELLOWSHIP

2023	Student intern at Division of Nephrology, Program in Membrane Biology, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts, USA. (Supervisor: Prof. Dr. Dennis Brown)

SPECIAL TRAINING

August 2025	The New Era of Lifelong Education (LE), CMU School of Lifelong Education, Chiang Mai University, Thailand
June 2025	"Matthew CMU AI Platform" for Academic Teaching and Research, Teaching and Learning Innovation Center (TLIC), Chiang Mai University, Thailand
July 2022	Chemical Waste Management and Laboratory Safety 2022, Chiang Mai University, Thailand
September 2020	Radiation Protection Course, Chiang Mai University, Thailand
August 2019	Chemical Waste Management and Laboratory Safety 2019, Chiang Mai University, Thailand

PROFESSIONAL LICENSES

2018-Present	Physical Therapy License (ก.12178)

ORGANIZATION AND PARTICIPATION

2018-Present	Member of Physical Therapy Council of Thailand (PT12372)

RESEARCH GRANT SUPPORT

2021-2022	Scholarship of Thailand Science Research and Innovation (TSRI) "Effect of chitosan oligosaccharides on the diabetic treatment and prevent renal complication via modulating the dysbiosis of gut microbiota and inflammation" (Co-PI)

RESEARCH FIELDS OF INTEREST

1. Cellular and molecular mechanisms of epithelial transport
2. Renal physiology in health and diseases
3. Effects of metabolic syndrome on intestinal barriers and epithelial tight junctions

4. Effects of drugs and functional foods on metabolic syndrome and its complications
5. Potential effects of functional foods extracted from animals and plants in cell culture, animal models and human

RESEARCH SKILLS

- Animal handling (intragastric gavage, injections, surgery, tissue collection)
- Differential centrifugation technique
- Oral glucose tolerance test (OGTT)
- Metabolic cage application
- Fecal lipid extraction technique using modified Folch method
- Renal tissue section using Stadie-Riggs Microtome and Cryostat
- Renal slice uptake experiment
- Western blot analysis
- Enzyme-linked immunosorbent assays (ELISA)
- Colorimetric assays
- Immunohistochemistry staining
- Immunofluorescence staining
- Special tissue staining (H&E, Periodic acid-Schiff, Masson's Trichrome, Oil Red O)
- Microscopic imaging using light, fluorescence and confocal microscopy
- Histopathological grading
- Cell culture
- Exocytosis and endocytosis assays of aquaporin-2 using LLC-PK1 renal epithelial cells
- Slot blot technique
- Statistical analysis (SPSS, Image J, GraphPad Prism, Volocity Software)

PUBLICATIONS

1. **Sutthasupha P**, Promsan S, Pengrattanachot N, Phengpol N, Lalichatsakul C, Thongnak L, Jaikumkao K, Pichyangkura R, Muanprasat C, Lungkaphin A. Chitosan oligosaccharide improves diabetic nephropathy by attenuating renal fibrogenesis and strengthening intestinal barriers in type 2 diabetic rats. **Chem Biol Interact.** 2025 Oct 22;420:111680. **(2024: IF 5.4 ISI: Q1)**

2. Jaruan O, Promsan S, Thongnak L, Pengrattanachot N, Phengpol N, **Sutthasupha P**, Lungkaphin A. Pyridoxine exerts antioxidant effects on kidney injury manifestations in high-fat diet-induced obese rats. **Chem Biol Interact.** 2025;415:111513. **(2024: IF 5.4 ISI: Q1)**

3. Phengpol N, Promsan S, Pengrattanachot N, Jaruan O, **Sutthasupha P**, Lungkaphin A. Maternal obesity promotes impaired renal autophagic process and kidney injury in male offspring. **Int J Obes (Lond).** 2025 Jun;49(6):1104-1115. **(2024: IF 3.8 ISI: Q1)**

4. Promsan S, Pengrattanachot N, Phengpol N, **Sutthasupha P**, Thongnak LO, Jaikumkao K, Lungkaphin A. Agomelatine Mitigates Kidney Damage in Obese Insulin-Resistant Rats by Inhibiting Inflammation and Necroptosis via the TNF-α/NF-κB/p-RIPK3 Pathway. **Int J Mol Sci.** 2025;26(5):1940. **(2024: IF 4.9 ISI: Q1)**

5. Pengrattanachot N, Thongnak L, Promsan S, Phengpol N, **Sutthasupha P**, Tocharus J, Lungkaphin A. Fructooligosaccharides Ameliorate Renal Injury and Dysfunction Through the Modulation of Gut Dysbiosis, Inhibition of Renal Inflammation, Oxidative Stress, Fibrosis, and Improve Organic Anion Transporter 3 Function in an Obese Rat Model. **Mol Nutr Food Res.** 2024;68(16):e2400191. **(2024: IF 4.2 ISI: Q1)**

6. Jaikumkao K, Thongnak L, Htun KT, Pengrattanachot N, Phengpol N, **Sutthasupha P**, Promsan S, Montha N, Sriburee S, Kothan S, Lungkaphin A. Dapagliflozin and metformin in combination ameliorates diabetic nephropathy by suppressing oxidative stress, inflammation, and apoptosis and activating autophagy in diabetic rats. **Biochim Biophys Acta Mol Basis Dis.** 2024;1870(1):166912. **(2024: IF 4.2 ISI: Q1)**

7. Thongnak L, Pengrattanachot N, Promsan S, Phengpol N, **Sutthasupha P**, Jaikumkao K, Lungkaphin A. Metformin mitigates renal dysfunction in obese insulin-resistant rats via activation of the AMPK/PPARα pathway. **Arch Pharm Res.** 2023;46(5):408-422. **(2024: IF 7.5 ISI: Q1)**

8. Thongnak L, Jaruan O, Pengrattanachot N, Promsan S, Phengpol N, **Sutthasupha P**, Jaikumkao K, Sriyotai W, Mahatheeranont S, Lungkaphin A. Resistant starch from black rice, Oryza sativa L. var. ameliorates renal inflammation, fibrosis and injury in insulin resistant rats. **Phytother Res.** 2023;37(3):935-948 **(2024: IF 6.3 ISI: Q1)**

9. **Sutthasupha P**, Promsan S, Thongnak L, Pengrattanachot N, Phengpol N, Jaruan O, Jaikumkao K, Muanprasat C, Pichyangkura R, Chatsudthipong V, Lungkaphin A. Chitosan oligosaccharide mitigates kidney injury in prediabetic rats by improving intestinal barrier and renal autophagy. **Carbohydr Polym.** 2022;288:119405. **(2024: IF 12.5 ISI: Q1)**

10. Promsan S, Thongnak L, Pengrattanachot N, Phengpol N, **Sutthasupha P**, Lungkaphin A. Agomelatine, a structural analog of melatonin, improves kidney dysfunction through regulating the AMPK/mTOR signaling pathway to promote autophagy in obese rats. **Food Chem Toxicol.** 2022;165:113190. **(2024: IF 3.5 ISI: Q1)**

11. Thongnak L, Pengrattanachot N, Promsan S, Phengpol N, **Sutthasupha P**, Chatsudthipong V, Lungkaphin A. The combination of dapagliflozin and statins ameliorates renal injury through attenuating the activation of inflammasome-mediated autophagy in insulin-resistant rats. **J Biochem Mol Toxicol.** 2022;36(4):e22978. **(2024: IF 2.8 ISI: Q2)**

12. Cherngwelling R, Pengrattanachot N, Swe MT, Thongnak L, Promsan S, Phengpol N, **Sutthasupha P**, Lungkaphin A. Agomelatine protects against obesity-induced renal injury

by inhibiting endoplasmic reticulum stress/apoptosis pathway in rats. **Toxicol Appl Pharmacol.** 2021;425:115601. **(2024: IF 3.4 ISI: Q2)**

13. **Sutthasupha P**, Lungkaphin A. The potential roles of chitosan oligosaccharide in prevention of kidney injury in obese and diabetic conditions. **Food Funct.** 2020;11(9):7371-7388. **(2024: IF 5.4 ISI: Q1)**

PRESENTATIONS AT INTERNATIONAL MEETINGS

April 2022 — **Prempree Sutthasupha**, Sasivimon Promsan, Nichakorn Phengpol, Rath Pichyangkura, Chatchai Muanprasat, Anusorn Lungkaphin. Chitosan Oligosaccharide Ameliorates Kidney Injury by Improving Intestinal Barrier Dysfunction and Lipid Metabolism in Obese-insulin Resistant Rats. Experimental Biology 2022, April 2-5, 2022. Pennsylvania Convention Center, Philadelphia, USA. **(Poster presentation)**

April 2022 — Anusorn Lungkaphin, Laongdao Thongnak, Sasivimon Promsan, Nichakorn Phengpol, **Prempree Sutthasupha**. Effects of Metformin on Attenuating Renal Dysfunction Through the Modulation of AMPK/PPARα Dependent Pathways in Obese Rats. Experimental Biology 2022, April 2-5, 2022. Pennsylvania Convention Center, Philadelphia, USA. **(Poster presentation)**

April 2022 — Sasivimon Promsan, Nichakorn Phengpol, **Prempree Sutthasupha**, Anusorn Lungkaphin. Agomelatine Ameliorates Obesity-Induced Kidney Injury through the Inhibition of Renal Fibrosis and Improvement of Impaired Autophagy. Experimental Biology 2022, April 2-5, 2022. Pennsylvania Convention Center, Philadelphia, USA. **(Poster presentation)**

April 2022 — Nichakorn Phengpol, Sasivimon Promsan, **Prempree Sutthasupha**, Anusorn Lungkaphin. Mother with Obesity Induced by High-Fat Diet Impaired Autophagic Process and Induced Renal Lipid Accumulation in the Offspring. Experimental Biology 2022, April 2-5, 2022. Pennsylvania Convention Center, Philadelphia, USA. **(Poster presentation)**

June 2021 — **Prempree Sutthasupha**, Sasivimon Promsan, Laongdao Thongnak, Nichakorn Phengpol, Chatchai Muanprasat, Rath Pichyangkura, Anusorn Lungkaphin. Effects of Chitosan Oligosaccharide on The Prevention of Kidney Injury in Prediabetic Rats. The 2021 National RGJ and RRI Conferences, June 14, 2021. **(Oral presentation)**

October 2020 — **Prempree Sutthasupha**, Chatchai Muanprasat, Rath Pichyangkura, Anusorn Lungkaphin. CHITOSAN OLIGOSACCHARIDE ON THE PREVENSTION OF KIDNEY INJURY IN PREDIABETIC RATS. The 46th International Congress on Science, Technology and Technology-based

Innovation (STT46), October 6-9, 2020. Ramkhamhaeng University, Bangkok, Thailand. **(Poster presentation)**

October 2020 — Sasivimon Promsan, Nichakorn Phengpol, **Prempree Sutthasupha**, Anusorn Lungkaphin. PROTECTIVE EFFECT OF AGOMELATINE ON OXIDATIVE STRESS AND AUTOPHAGY PATHWAY IN OBESITY-INDUCED KIDNEY INJURY. The 46th International Congress on Science, Technology and Technology-based Innovation (STT46), October 6-9, 2020. Ramkhamhaeng University, Bangkok, Thailand. **(Poster presentation)**

October 2020 — Nichakorn Phengpol, Sasivimon Promsan, **Prempree Sutthasupha**, Anusorn Lungkaphin. HIGH-FAT DIET INDUCED MATERNAL OBESITY EFFECTS TO DYSREGULATION OF AUTOPHAGY PROCESS IN KIDNEY OF MALE OFFSPRING. The 46th International Congress on Science, Technology and Technology-based Innovation (STT46), October 6-9, 2020. Ramkhamhaeng University, Bangkok, Thailand. **(Poster presentation)**