CURRICULUM VITAE

NAME: **Thanawat THUMRONGTARADOL**

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RESEARCH INTERESTS: My research interests focus on NMR-based metabolomics and its application in the comparative analysis of biological systems. I am particularly interested in cancer-related studies, including biomarker discovery and metabolic profiling. In addition, my work involves the study of bioactive peptides with antimicrobial, antihypertensive, antioxidant, and anti-tumor activities, aiming to explore their therapeutic potential. I also integrate bioinformatics approaches, such as drug–gene interaction analysis, to identify potential therapeutic targets. Ultimately, my goal is to contribute to translational research and precision medicine.

EDUCATION:

Ph.D. in Soft Matter Science, **Hokkaido University** (2022 - Present)

M.Sc. in Biotechnology, **Mahidol University** (2016 - 2019)

B.Sc. in Biosciences (2nd Class Honours), **Mae Fah Luang University** (2012 - 2016)

RESEARCH AND WORK EXPERIENCE:

Department of Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University (January 2026 - Present)
Master's Degree Research Assistant

Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University (2019 - 2022)
Master's Degree Research Assistant

International Center for Biotechnology (ICBiotech), Osaka University (January – February 2018)
Special Research Student

Proteomics Research Laboratory, Genome Technology Research Unit, BIOTEC-NSTDA (June – August 2015)
Student Intern and Research Associate

PUBLICATIONS

1. Hu Z, Jiang J, Abe J, **Thumrongtaradol T**, Akasaka M, Ohnishi Y, Osada S, Arai T, Kumeta H, Kumaki Y, Yamauchi K, Shimizu Y, Yokoi Y, Nakamura K, Ayabe T, Nakamura K, Kimura T, Tamakoshi A, Aizawa T. Machine learning-enabled quantification of fucosylated human milk oligosaccharides in human breast milk by benchtop ^{1}H NMR spectroscopy. **Submitted** (2026).
2. Jiang J, Hu Z, Abe J, **Thumrongtaradol T**, Akasaka M, Ohnishi Y, Osada S, Arai T, Kumeta H, Kumaki Y, Yamauchi K, Shimizu Y, Yokoi Y, Nakamura K, Ayabe T, Nakamura K, Kimura T, Tamakoshi A, Aizawa T. Precise quantification of lactose in human milk by benchtop NMR: oligosaccharide interference correction and validation against high-field NMR. **Submitted** (2026).
3. Saengsri C, Sa-nguanraksa D, **Thumrongtaradol T**, Phumphuang S, O-charoenrat P. Outcomes of wound drainage versus no wound drainage in the patients undergoing mastectomy. Thai J Surg. 2022;43(2):57-63.
4. Kongon P, Sa-nguanraksa D, Samarnthai N, O-charoenrat E, **Thumrongtaradol T**, O-charoenrat P. Sentinel nodal micro-metastases detected by the One-Step Nucleic Acid Amplification whole node assay and the impact on adjuvant treatment and outcomes in early breast cancers: the first report from Thailand. J Med Assoc Thai. 2021;104(5):764-71.
5. Sa-nguanraksa D, Mitpakdi K, Samarnthai N, **Thumrongtaradol T**, O-charoenrat P. Expression of long-form prolactin receptor is associated with lower disease-free and overall survival in node-negative breast cancer patients. Gland Surg. 2021;10(1):130-42.
6. Nimboriboonporn A, Sa-nguanraksa D, Samarnthai N, **Thumrongtaradol T**, Phumphuang S, O-charoenrat P. Predictive factors for sentinel lymph node metastasis in Thai breast cancer patients. Thai J Surg. 2020;41(2):29-39.
7. Sa-nguanraksa D, Thasripoo C, Samarnthai N, Kummalue T, **Thumrongtaradol T**, O-charoenrat P. The role of prolactin/prolactin receptor polymorphisms and expression in breast cancer susceptibility and outcome. Transl Cancer Res. 2020;9(10):6344-53.
8. Polchai N, Sa-nguanraksa D, Numprasit W, **Thumrongtaradol T**, O-charoenrat E, O-charoenrat P. A comparison between the online prediction models CancerMath and PREDICT as prognostic tools in Thai breast cancer Patients. Cancer Manag Res. 2020;12:5549-59.
9. Sa-nguanraksa D, Vongjirad A, Samarnthai N, Warnnissorn M, **Thumrongtaradol T**, O-charoenrat P. Should sentinel lymph node biopsy be performed in ductal carcinoma in situ diagnosed on core needle biopsy? J Med Assoc Thai. 2020;103(Suppl.5):86-90.
10. Sa-nguanraksa D, Sirikett H, O-charoenrat E, **Thumrongtaradol T**, Phumphuang S. The role of epidermal growth factor receptor in head and neck squamous cell carcinoma in Thai patients. J Med Assoc Thai. 2020;103(Suppl.5):96-102.

11. O-charoenrat P, Sa-nguanraksa D, **Thumrongtaradol T**, Kummalue T. Development of an integrative medicine program for breast cancer patients at the largest tertiary referral center in Thailand. J Med Assoc Thai. 2020;103(Suppl.5):32-8.
12. Saigosoom N, Sa-nguanraksa D, O-charoenrat E, **Thumrongtaradol T**, O-charoenrat P. The evaluation of Magee Equation 2 in predicting response and outcome in hormone receptor-positive and HER2-negative breast cancer patients receiving neoadjuvant chemotherapy. Cancer Manag Res. 2020;12:2491-9.
13. Chaisrisawatsuk S, Sa-nguanraksa D, **Thumrongtaradol T**, O-charoenrat P. Prevalence of human papilloma virus in head and neck cancer in Thai population. J Med Assoc Thai. 2020;103(Suppl.2):37-41.

PRESENTATIONS

2024 International Graduate Program Symposium 2024, December 4, Hokkaido University, Japan
"Comparative analysis of mouse and human breast milk by NMR metabolomics"

2024 The 63rd Annual Meeting of the NMR Society of Japan, October 30 - November 1, Hokkaido University, Japan
"NMR-based metabolomics: Insight into the nutritional metabolites between mouse and human breast milk"

2024 The 10th Hokkaido University Cross-Departmental Symposium, September 6, Hokkaido University, Japan
"Application of NMR-based metabolomics for comparative analysis of mouse and human breast milk"

2018 The 30th Annual Meeting of the Thai Society for Biotechnology and International Conference, November 22-23, Ambassador Hotel, Bangkok, Thailand
"Novel antihypertensive and antioxidative peptides from Thai herbs"

2018 Final presentation of Student Exchange Support Program, February 8, Osaka University, Japan
"Development of *RtOLE1* disruptant and *Rt* or *ScOLE1* overexpression mutant in *Rhodosporidium toruloides* NP11 strain"

2016 The 3rd Science Symposium, April 24, Mae Fah Luang University, Chiang Rai, Thailand
"Antimicrobial activity of synthetic peptides derived from heat stabilized defatted rice bran"

AWARD:	**3rd Science Symposium, School of Science, Mae Fah Luang University** Outstanding Poster Presentation
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