

Curriculum vitae

Name-Surname: Dr.Thitianan Kulsirirat

Academic position: -

Office address: Department of Biopharmacy, Faculty of Pharmacy, Srinakharinwirot University

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Education

Degree	Major	University	Year
Bachelor of Science in Pharmacy	Pharmaceutical Sciences	Huachiew Chalermprakiet University	2013
Master of Science in Pharmacy	Pharmaceutics	Mahidol University	2016
Doctor of Philosophy	Pharmaceutics	Mahidol University	2020

***** Postdoctoral Researcher** Faculty of Pharmacy, Mahidol University, Thailand (2021-2023)

Research areas: Stem Cell research, Drug delivery system, Permeation, cellular and small animal research, Pharmacokinetics

Awards/ Honors and Scholarship

2024	Poster presentation award (Pharmacology and Toxicology) as the PST Global PharmaTech Excellence Title: Isolation and Characterization of Suprapatellar Fat Pad Derived Mesenchymal Stem Cells in Osteoarthritis Patients Aiming as a Novel Source for Regenerative Medicine
2023 - 2024	Funding from The Agricultural Research Development Agency (Public Organization) (ARDA)

	Title: The Development of highly water soluble Fa thalai chon nano formulation and evaluation of pharmaceutical and bio pharmaceutical of the formulation
2021 - 2023	Funding from Health Systems Research Institute (HSRI64-043), Thailand. Title: The development of innovative treatment using polymeric targetable drug delivery system for Thai medicinal herb ingredients to stem cells with the pharmacokinetics and pharmacodynamics principle
2022	Oral Presentation for the Distinguished Thesis Awards, Fiscal Year 2022 Category: Biological Sciences Faculty of Graduate Studies, Mahidol University Title: The study of medical and pharmacokinetic potential of Thai herbal extracts on differentiation of stem cells aiming for regenerative medicine
2019	3rd Prize winner Innovative Idea Competition of Thai Students' Association in Japan under the Royal Patronage: TSAJ, Tokyo, Japan Title: The development of drug delivery system providers for geriatric care in Japan
2019	Most Awesome Award Presentation PK Summer Boot Camp RIKEN, Yokohama, Japan
2016 - 2019	The Royal Golden Jubilee Ph.D. Programme (RGJ) Scholarship Title: The study of medical and pharmacokinetic potential of Thai herbal extracts on differentiation of stem cells aiming for regenerative medicine
2015	Certificate of Honor and Appreciation Awarded Princess Maha Chakri Sirindhorn Congress International approach to sustainable research and development
2015	Certificate of award on the 1st International Conference on Pharmacy Education and Research Network of ASEAN (ASEAN PHARMNET I) Title: Pgp-GLO™ Assay Systems: A tool for high-throughput screening to predict biopharmaceutics of non-ionic surfactant
2013	The 60th Year Supreme Reign of His Majesty King Bhumibol Adulyadej Scholarship Faculty of Graduate Studies, Mahidol University
2013	Certificate of award on Special project of Pharmaceutical Science Title: Effects of dry binders on the mechanical and disintegration properties of nava-kote tablets

Professional society membership

- Graduate Studies of Mahidol University Alumni
- Japan Society of Drug Delivery system
- TIPA (Thai Industrial Pharmacist Association)

Guest Speaker:

1. The Academy of Pharmaceutical Science and Technology, Kobe Gakuin University, Japan. 6

February 2019

Title: Possible using of the molecule from Thai herbal extract on the differentiation of mesenchymal stem cells aiming for regenerative medicine

2. Drug Discovery and Development, Miracle Grand Convention Hotel, Bangkok, Thailand. 25-27

December 2017

Title: Classification of drug molecules with ADMET concept in drug permeability studies.

Academic Article:

Theory and practice of *in vitro* permeation studies for drug classification based on the Biopharmaceutics Classification System (BCS); Thai Industrial Pharmacist Association (TIPA), June 2018

Publications and Academic presentation

Oral Presentations:

Titles	Year
1. T. Kulsirirat , K. Sathirakul. Title: The study of medical and pharmacokinetic potential of Thai herbal extracts on differentiation of stem cells aiming for regenerative medicine Distinguished Thesis Awards, Fiscal Year 2022, Faculty of Graduate Studies, Mahidol University	2022
2. T. Kulsirirat , K. Sathirakul, N. Kamei, Takeda-Morishita M., Title: Design and development of a novel Andrographolide formulation for intra-articular drug delivery systems. 2021 CSPA/PSJ/CC-CRS SYMPOSIUM Pharmaceutical Sciences in a Pandemic World, Canada. (online).	2021
3. T. Kulsirirat , Y. Takahashi, K. Sathirakul, N. Kamei, Takeda-Morishita M., Title: Design and development of Andrographolide for intra-articular drug delivery systems. The 36 th Annual meeting of the Japan Society of Drug Delivery System, Kobe, Japan.	2020
4. T. Kulsirirat , K. Sathirakul., S. Honsawek, P. Rugthong., Takeda-Morishita M., Title: The study of controlled/sustained release formulation for Thai herbal extract to improve delivery and extend residence time of joint disease therapy aiming for regenerative medicine. The 35 th Annual meeting of the Japan Society of Drug Delivery System, Yokohama, Japan.	2019
5. T. Kulsirirat , S. Honsawek, Takeda-Morishita M., K. Sathirakul.	2019

Title: Advanced therapeutics promising of the Thai herbal extract molecule on the differentiation of mesenchymal stem cells aiming for regenerative medicine. RGJ-University Forum. Bangkok, Thailand.	
6. T. Kulsirirat , K. Sathirakul. Title: High-Throughput Screening Prediction for Biopharmaceutics of Non-ionic Surfactant Using Pgp-Glo™ Assay Systems. Princess Maha Chakri Sirindhorn Congress (The 5 th Interdisciplinary Day Conference) Interdisciplinary Approach to Sustainable Research and Development. IMPACT Forum, IMPACT, Muang Thong Thani, Nonthaburi, Thailand.	2015

Poster Presentations:

Titles	Year
1. Thitianan Kulsirirat , Sittisak Honsawek, Pattarawit Rukthong, Chutwadee Krisanapun and Korbtham Sathirakul Title: Isolation and Characterization of Suprapatellar Fat Pad Derived Mesenchymal Stem Cells in Osteoarthritis Patients Aiming as a Novel Source for Regenerative Medicine. International Conference and Exhibition on Pharmaceutical Sciences and Technology 2024, Chiang Mai, Thailand	2024
2. N. Sowankul, N. Thanusorn, K. Sathirakul, P. Ruenraroengsak, J. Leanpolchareanchai, J. Romsaiyud, T. Kulsirirat Title: The study of physicochemical properties, toxicity, and biopharmaceutics of highly aqueous soluble Andrographolide nanoparticles developed in house in order to evaluate the possibility for respiratory tract targeting as nasal nebulizer. Faculty of Pharmacy, Mahidol University.	2023
3. T. Kulsirirat , S. Honsawek, Takeda-Morishita M., K. Sathirakul. Title: The Development of Polymeric Drug Delivery System to Target Active Ingredient in Thai Medicinal Herb Administered Intra-articularly to Regulate Mesenchymal Stem Cells for Regenerative Medicine. The 2021 National RGJ and RRI Conferences.	2021
4. S. Boonyuen, T. Phromsatit, P. Arpornmaeklong, Y. Shirosaki, T. Teerawatananond, T Kulsirirat , K. Sathirakul, J. Rabablert. Title: <i>In Vitro</i> Cytotoxicity Study of Copper and Gold Porphyrin Complexes, PACCON 2020, IMPACT Forum, Muangthong Thani, Bangkok, Thailand.	2020
5. T. Phromsatit, S. Boonyuen, T Kulsirirat , K. Sathirakul.,	2019

Title: Synthesis, and cytotoxicity study of Cu (II) tetrakis(4-alkyloxy) phenyl porphyrin complexes, PACCON 2019, Bangkok International Trade & Exhibition Centre (BITEC), 7-8 February, 2019 Bangkok, Thailand	
6. T. Kulsirirat , K. Sathirakul., Title: Pgp-GLO™ Assay Systems: A tool for high-throughput screening to predict biopharmaceutics of non-ionic surfactant, The 1 st International Conference on Pharmacy Education and Research Network of ASEAN Harmonizing the Diversity of Pharmacy Profession in the Era of AEC (ASEAN PHARM NET I), Bangkok, Thailand	2015
7. B. Nimprayoon, P. Rukthong, P.Dechwongya, S. limpisood T. Kulsirirat , K. Sathirakul., Title: <i>In Silico</i> Biopharmaceutics of α -Mangostin Garcinia mangostana L. Pericarp Extract, The 3 rd Scientific Program Current Drug Development International Conference (CDD 2014) Ao Nang Beach Resort, Ao Nang, Krabi, Thailand	2014

Proceeding:

Titles	Year
1. Tiranupan S, Kulsirirat T , Thongnopkoon T. Title: Development of PEG-modified phytosome of naringin for improving physical properties, stability and cytotoxicity in Caco-2 cells. Proceedings of the 8 th International Conference and Exhibition on Pharmaceutical Sciences and Technology (PST2025); 2025 June 12-13; Bangkok, Thailand, p. 1-5.	2025
2. Ketharam M, Leanpolchareanchai J, Chirachanchai S, Kulsirirat T , Sathirakul K. Title: The development, physical characterization, and evaluation of pharmaceutical and biopharmaceutical properties of the intrapulmonary drug delivery system (DDS) of nano-andrographolide. Proceedings of the 45 th International Meeting of the Pharmacological and Therapeutic Society of Thailand Annual Meeting “Bridging the Gap: Innovations and Translations in Pharmacology”; 2024 May 15-17; Bangkok, Thailand, p. 1-14.	2024
3. Supamitkitsana A, Kulsirirat T , Potaros T, Maiuthed A , Assawakitkulroj N, Rukthong P. Title: Physiologically based pharmacokinetic modeling to simulate tissue-specific pharmacokinetics of genistein and its metabolites in rats for targeted treatment. Proceedings of the 9 th National Conference on Informatics, Agriculture, Management, Business Administration, Engineering, Science and Technology; 2024 May 29-31; Krabi, Thailand, p. 1-11.	2024
4. C. Jitsongserm, J. Bonyapichest, K. Sathirakul, S. Limpisood, T.Kulsirirat , N. Boonnak, P. Buranatrakul, A.W. Salae, P. Rukthong.,	2018

<p>Title: <i>IN SILICO</i> AND <i>IN VITRO</i> STUDIES INDICATE THE SOLUBILITY AND PERMEABILITY PROPERTIES OF CURCUMIN. The 5th international Conference on Drug Development (CDD 2018) and 3rd international on Herb and Traditional Medicine (HTM 2018), 165-166. May 23-25 Songkhla, Thailand</p>	
<p>5. P. Lertpatipanpong, T.Pupen, K.Sathirakul, C.Krisanapun, S. Limpisood, S. Leethochawalit, T.Kulsirirat, P.Buranatrakul, P. Rakthong., Title: DEVELOPMENT OF PHARMACOKINETIC MODEL OF EZETIMIBE USING COMPUTER SIMULATIONS. The 5th international Conference on Drug Development (CDD 2018) and 3rd international on Herb and Traditional Medicine (HTM 2018), 142-144. May 23-25 Songkhla Thailand</p>	2018
<p>6. P.Phonboon, K.Sathirakul, C. Krisanapun S.Limpisood, T.Kulsirirat, S.Leethochawalit, P.Buranatrakul, P. Rukthong., Title: THE DEVELOPMENT OF WARFARIN PHARMACOKINETICS AND PHARMACODYNAMICS MODEL TO PREDICT INR VALUE USING COMPUTER SIMULATIONS. The 5th international Conference on Drug Development (CDD 2018) and 3rd international on Herb and Traditional Medicine (HTM 2018), 146-147. May 23-25 Songkhla Thailand.</p>	2018
<p>7. T. Kulsirirat, P. Rukthong, P.Dechwongya, K.Sathirakul. Title: The optimum concentration of non-ionic surfactant for improvement of drug transport using high-throughput screening method. The JSPS-NRCT Follow-Up Seminar 2017 and 33rd International Annual Meeting in Pharmaceutical Sciences (JSPS-NRCT 2017 AND IAMPS 33). March 2-3, 2017, The Berkeley Hotel Pratunam, Bangkok, Thailand.</p>	2017
<p>8. K. Methaset, K.Sathirakul, S.Limpisood, T.Kulsirirat, S.Leethochawalit, N. Chulsom, P. Rukthong Title: Pharmacokinetic Modeling to Predict the Phenytoin Level in Blood by Using SELLA Program. Proceeding for the 4th Current Drug Development International Conference 2016 (CDD2016), Phuket Graceland Resort & Spa, Patong Beach, Phuket, Thailand.</p>	2016
<p>9. T. Kulsirirat, C. Lorpongpaiboon, K. Hammaworachat, S. Kasemsuwan, S. Channarong. Title: Effects of dry binders on the mechanical and disintegration properties of Nava-Kote tablets. Thai Journal of Pharmaceutical Sciences (TJPS), 2012, 36(SUPPL.), pp. 128–131.</p>	2012

International Publications:

Titles	Participation	Year
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1. Kuendee, N., Naladta, A., Kulsirirat, T. , Yimsoo, T., Yingmema, W., Pansuksan, K., Sathirakul, K., Sukprasert, S. Lysiphyllum strychnifolium (Craib) A. Schmitz Extracts Moderate the Expression of Drug-Metabolizing Enzymes: <i>In Vivo</i> Study to Clinical Propose. Pharmaceuticals 2023, 16, 237. https://doi.org/10.3390/ph16020237 (Impact Factor: 5.215, Q1/2021); citations 2	Author	2023
2. Woottisin, N., Sukprasert, S., Kulsirirat, T. , Tharavanij, T., Sathirakul, K. Evaluation of the Intestinal Permeability of Rosmarinic Acid from Thunbergia laurifolia Leaf Water Extract in a Caco-2 Cell Model. Molecules 2022, 27(12), 3884; https://doi.org/10.3390/molecules27123884 . (Impact Factor: 4.927, Q1/2021); citations 3	Author	2022
3. Kulsirirat T. , Sathirakul K., Kamei N., Takeda-Morishita M. The <i>in vitro</i> and <i>in vivo</i> study of novel formulation of andrographolide PLGA nanoparticle embedded into gelatin-based hydrogel to prolong delivery and extend residence time in joint. Int. J. Pharm. 2021, 602 120618 https://doi.org/10.1016/j.ijpharm.2021.120618 . (Impact Factor: 6.51, Top 10% Q1/2021); citations 25	First author	2021
4. Kulsirirat, T. , Honsawek, S., Takeda-Morishita, M., Sinchaipanid, N., Udomsinprasert, W., Leanpolchareanchai, J., Sathirakul, K. The Effects of Andrographolide on the Enhancement of Chondrogenesis and Osteogenesis in Human Suprapatellar Fat Pad Derived Mesenchymal Stem Cells. Molecules 2021, 26(7), 1831; https://doi.org/10.3390/molecules26071831 . (Impact Factor: 4.927, Q1/2021); citations 11	First author	2021
5. Rukthong, P., Sereesongsang, N., Kulsirirat, T. et al. <i>In vitro</i> investigation of metabolic fate of α -mangostin and gartanin via skin permeation by LC-MS/MS and in silico evaluation of the metabolites by ADMET predictor™. BMC Complement Med Ther 2020, 20, 359.; https://doi.org/10.1186/s12906-020-03144-7 (Impact Factor:2.838, Q1/2021); citations 3	Author	2020
6. Dechwongya, P., Limpisood, S., Boonnak, N., Mangmool, S., Takeda-Morishita, M., Kulsirirat, T. , Rukthong, P., Sathirakul, K. The Intestinal Efflux Transporter Inhibition Activity of Xanthones from Mangosteen Pericarp: An <i>In Silico</i> , <i>In Vitro</i> and <i>Ex Vivo</i> Approach. Molecules	Author	2020

2020, 25(24), 5877; https://doi.org/10.3390/molecules25245877 . (Impact Factor: 4.927, Q1/2021); citations 2		
7. Kulsirirat T. , Rukthong P., Dechwongya P. and Sathirakul K. The Potential of Non-Ionic Surfactant Against P-Glycoprotein Efflux Transporters for Drug Development System. <i>J Bioequiv Availab</i> 2017, 9:528-529. DOI: 10.4172/jbb.1000357	First author	2017
8. Rukthong P., Sereesongsang N., Kulsirirat T. , Nimprayoon B., Sathirakul K. Effect of α -mangostin on Enhanced Transdermal Bioavailability of Gartanin via Efflux Transporters. <i>J Bioequiv Availab</i> 2017, 9:455-462. DOI: 10.4172/jbb.1000344	Author	2017