



## PROFESSOR EMERITUS DR. VATCHARIN RUKACHAISIRIKUL

**OFFICE ADDRESS** Division of Physical Science, Faculty of Science,  
Prince of Songkla University, Hat Yai, Songkhla 9110, Thailand

### EDUCATION

- 1979 B.Sc. (Chemistry) (1<sup>st</sup> Class Honors), Prince of Songkla University, Thailand
- 1981 M.Sc. (Organic Chemistry), Mahidol University, Thailand
- 1987 Ph.D. (Chemistry), Australian National University, Australia
- 1990 Alexander von Humboldt Fellow, Philipps Universität, Germany

### PROFESSIONAL EXPERIENCE

- 1981 – 1992 Lecturer, Department of Chemistry, Faculty of Science, Prince of Songkla University
- 1992 – 1998 Assistant Professor, Department of Chemistry, Faculty of Science, Prince of Songkla University
- 1998 – 2006 Associate Professor, Department of Chemistry, Faculty of Science, Prince of Songkla University
- 2006 – 2015 Professor, Department of Chemistry, Faculty of Science, Prince of Songkla University
- 2015 – present Professor obtained a high salary level, Department of Chemistry, Faculty of Science, Prince of Songkla University
- 2022 – present Professor Emeritus, Faculty of Science, Prince of Songkla University

### HONORS AND AWARDS

- 2008 Outstanding Lecturer in Research, Faculty of Science, Prince of Songkla University
- 2008 PSU Outstanding Lecturer in Research, Prince of Songkla University
- 2008 – 2011 Senior Research Scholar, Thailand Research Fund
- 2011 2011 PSU Research Grand Slam, Prince of Songkla University
- 2011 – 2014 Senior Research Scholar, Thailand Research Fund
- 2015 Thailand Outstanding Researcher Award, National Research Council of Thailand
- 2015 Outstanding Alumni Award, the Graduate School, Mahidol University
- 2015 NSTDA Chair Professor, the Crown Property Bureau and the National Science and Technology Development Agency (NSTDA)
- 2016 The Blue Jacket 2016, Prince of Songkla University
- 2017 Outstanding Scientist Award from Thailand Toray Science Foundation
- 2018 The Outstanding Researcher 2017, Prince of Songkla University
- 2021 – 2023 World's Top 2% Scientists 2021, 2022 and 2023 in Medicinal and Biomolecular Chemistry, Stanford University, United States of America

2023                    2023 Outstanding Scientist Award, Foundation of the Promotion of Science and Technology under the Patronage of His Majesty the King

## PUBLICATIONS (2019-2024)

### ***h*-index of 41 in the Scopus Database (17 July 2024)**

1. Putra, H.N., **Rukachaisirikul, V.**, Saithong, S., Phongpaichit, S., Preedanon, S., Sakayaroj, J., Hadsadee, S., Jungstittiwong, S. 2019. Caryophyllene sesquiterpenes, chromones and 10-membered macrolides from the marine-derived fungus *Pseudopestalotiopsis* sp. PSU-AMF45. *Tetrahedron*, 75, 130530.
2. Vijiathan, P., **Rukachaisirikul, V.**, Muanprasat, C., Panprasert, J., lawsipo, P., Tadpetch, K. 2019. Unified synthesis and cytotoxic activity of 8-*O*-methylfusarubin and its analogues. *Org Biomol Chem*, 17, 7078-7087.
3. Chalothorn, T., **Rukachaisirikul, V.**, Phongpaichit, S., Pannara, S., Tansakul, C. 2019. Synthesis and antibacterial activity of emodin and its derivatives against methicillin-resistant *Staphylococcus aureus*. *Tetrahedron Lett*, 60, 151004.
4. Klaiklay, S., **Rukachaisirikul, V.**, Saithong, S., Phongpaichit, S., Sakayaroj, J. 2019. Trichothecenes from a soil-derived *Trichoderma brevicompactum*. *J Nat Prod*, 82, 687-693.
5. Suwannarat, S., lewkittayakorn, J., Sukpondma, Y., **Rukachaisirikul, V.**, Phongpaichit, S., Chotigeat, W. 2019. Optimization of the production of lovastatin from *Aspergillus sclerotiorum* PSU-RSPG178 under static liquid culture using response surface methodology. *Sains Malays*, 48, 93-102.
6. **Rukachaisirikul, V.**, Chinpha, S., Phongpaichit, S., Saikhwan, N., Sakayaroj, J., Preedanon, S. 2019. Sesquiterpene and monoterpene derivatives from the soil-derived fungus *Trichoderma reesei* PSU-SPSF013. *Phytochem Lett*, 30, 124-129.
7. **Rukachaisirikul, V.**, Chinpha, S., Saetang, P., Phongpaichit, S., Jungstittiwon, S., Hadsadee, S., Sakayaroj, J., Preedanon, S., Temkitthawon, P., Ingkaninan, K. 2019. Depsidones and a dihydroxanthone from the endophytic fungi *Simplicillium Lanosoniveum* (JFH Beyma) Zare & W. Gams PSU-H168 and PSU-H261. *Fitoterapia*, 138, 104286.
8. Boonyaketguson, S., **Rukachaisirikul, V.**, Phongpaichit, S., Trisuwan, K. 2019. Deoxybenzoin and flavan derivatives from the twigs of *Artocarpus lakoocha*. *Phytochem Lett*, 31, 96-100.
9. Helaly, S.E., Kuephadungphan, W., Phainuphong, P., Ibrahim, M.A.A., Tasanathai, K., Mongkolsamrit, S., Luangsaard, J.J., Phongpaichit, S., **Rukachaisirikul, V.**, Stadler, M. 2019. Pigmentosins from *Gibellula* sp. as antibiofilm agents and a new glycosylated asperfuran from *Cordyceps javanica*. *Beilstein J Org Chem*, 15, 2968-2981.
10. Buatong, J., **Rukachaisirikul, V.**, Sangkanu, S., Surup, F., Phongpaichit, S. 2019. Antifungal metabolites from marine-derived *Streptomyces* sp. AMA49 against *Pyricularia oryzae*. *J Pure Appl Microbiol*, 13, 653-665.
11. Akrimajirachoote, N., Satitsri, S., Sommart, U., **Rukachaisirikul, V.**, Muanprasat, C. 2020. Inhibition of CFTR-mediated intestinal chloride secretion by a fungus-derived arthropsolide A: Mechanism of action and anti-diarrheal efficacy. *Eur J Pharmacol*, 885, 173393.

12. Saetang, P., **Rukachaisirikul, V.**, Phongpaichit, S., Preedanon, S., Sakayaroj, J., Hadsadee, S., Jungstittiwong, S. 2020. Aspertamarinolides A-C:  $\gamma$ -butenolides from the marine-derived fungus *Aspergillus tamarii* PSU-MF90. *Tetrahedron Lett*, 61, 152529.
13. Iewkittayakorn, J., Kuechoo, K., Sukpondma, Y., **Rukachaisirikul, V.**, Phongpaichit, S., Chotigeat, W. 2020. Lovastatin production by *Aspergillus sclerotiorum* using agricultural waste. *Food Technol Biotechnol*, 58, 230-236.
14. Waddell, L.J.N., Watts, O.F.B., Saetang, P., **Rukachaisirikul, V.**, Bates, R.W. 2020. Asperidine B: Total synthesis and structure correction. *Tetrahedron Lett*, 61, 152078.
15. Duangjan, C., **Rukachaisirikul, V.**, Kaeobamrung, J. 2020. Synthesis of imidazolidin-2-ones *via* the cascade reactions of  $\alpha$ -chloroaldoxime *O*-methanesulfonates. *Tetrahedron Lett*, 61, 152330.
16. Saetang, P., **Rukachaisirikul, V.**, Phongpaichit, S., Preedanon, S., Sakayaroj, J., Hadsadee, S., Jungstittiwong, S. 2021. Antibacterial and antifungal polyketides from the fungus *Aspergillus unguis* PSU-MF16. *J Nat Prod*, 84, 1498-1506.
17. Kaewmalee, J., Ontawong, A., Duangjai, A., Tansakul, C., **Rukachaisirikul, V.**, Muanprasat, C., Srimaroeng, C. 2021. High-efficacy  $\alpha,\beta$ -dehydromonacolin S improves hepatic steatosis and suppresses gluconeogenesis pathway in high-fat diet-induced obese rats. *Pharmaceuticals*, 14, 375.
18. Duangjai, A., **Rukachaisirikul, V.**, Sukpondma, Y., Srimaroeng, C., Muanprasat, C. 2021. Antispasmodic effect of asperidine B, a pyrrolidine derivative, through inhibition of L-Type  $Ca^{2+}$  channel in rat ileal smooth muscle. *Molecules*, 26, 5492.
19. Yimnual, C., Satitsri, S., Ningsih, B.N.S., **Rukachaisirikul, V.**, Muanprasat, C. 2021. A fungus-derived purpactin A as an inhibitor of TMEM16A chloride channels and mucin secretion in airway epithelial cells. *Biomed Pharmacother*, 139, 111583.
20. Boonyaketguson, S., **Rukachaisirikul, V.**, Phongpaichit, S., Trisuwan, K. 2021. Limonoids and carbazole alkaloids from the twigs of *Chalcas siamensis* Tanaka. *Nat Prod Res*, 36, 122-129.
21. Sangkanu, S., **Rukachaisirikul, V.**, Suriyachadkun, C., Phongpaichit, S. 2021. Antifungal activity of marine-derived actinomycetes against *Talaromyces marneffe*. *J Appl Microbiol*, 130, 1508-1522.
22. Yaosanit, W., **Rukachaisirikul, V.**, Phongpaichit, S., Preedanon, S., Sakayaroj, J. 2022. Sesquiterpenes from the soil-derived fungus *Trichoderma citrinoviride* PSU-SPSF346. *Beilstein J Org Chem*, 18, 479-485.
23. Sommart, U., **Rukachaisirikul, V.**, Saithong, S., Phongpaichit, S., Sakayaroj, J., Preedanon, S., Chainok, K., Khunrong, T. 2022. 2-Oxaspiro-[4.5]decane and  $\alpha$ -pyrenocine derivatives from the endophytic fungus *Rousoella* sp. PSU-H51. *Nat Prod Res*, 36, 4911-4920.
24. Kaewin, S., Changsorn, K., Sungkaworn, T., Hiranmartsuwan, P., Yaosanit, W., **Rukachaisirikul, V.**, Muanprasat, C. 2022. Fungus-derived 3-hydroxyterphenyllin and candidusin A ameliorate palmitic acid-induced human podocyte injury via anti-oxidative and anti-apoptotic mechanisms. *Molecules*, 27, 2109.

25. Nuansri, S., **Rukachaisirikul, V.**, Rungwirain, N., Kaewin, S., Yimnual, C., Phongpaichit, S., Preedanon, S., Sakayaroj, J., Muanprasat, C. 2022.  $\alpha$ -Pyrone and decalin derivatives from the marine-derived fungus *Trichoderma harzianum* PSU-MF79. *Nat Prod Res*, 36, 5462–5469.
26. Ningsih, B.N.S., **Rukachaisirikul, V.**, Pansrinun, S., Phongpaichit, S., Preedanon, S., Sakayaroj, J. 2022. New aromatic polyketides from the marine-derived fungus *Pseudopithomyces maydicus* PSU-AMF350 and their antimicrobial activity. *Nat Prod Res*, 36, 4982-4989.
27. Arunpanichlert, J., **Rukachaisirikul, V.**, Chaiwarin, T., Tantirungrotechai, Y., Khamthong, N., Phongpaichit, S., Liamthong, S., Sakayaroj, J. 2022. Dimeric  $\gamma$ -lactone derivatives from the soil-derived fungus *Lasiodiplodia theobromae* NSTRU-PN1.4. *Nat Prod Res*, 36, 1948-1958.
28. Ontawong, A., Duangjai, A., Sukpondma, Y., Tadpetch, K., Muanprasat, C., **Rukachaisirikul, V.**, Inchai, J., Vaddhanaphuti, C.S. 2022. Cholesterol-lowering effects of asperidine B, a pyrrolidine derivative from the soil-derived fungus *Aspergillus sclerotiorum* PSU-RSPG178: A potential cholesterol absorption inhibitor. *Pharmaceuticals*, 15, 955.
29. Saebang, Y., Kaeobamrung, J., **Rukachaisirikul, V.** 2022. Synthesis of eleven-membered cyclic urea fused quinazolinones. *Synlett*, 33, 1371-1376.
30. Noitem, R., Pongkorsakol, P., Changsen, C., Sukpondma, Y., Tansakul, C., **Rukachaisirikul, V.**, Muanprasat, C. 2022. Natural statin derivatives as potential therapy to reduce intestinal fluid loss in cholera. *PLoS Negl Trop Dis*, 16, e0010989.
31. Tadpetch, K., Vijitphan, P., Kaewsen, S., Thiraporn, A., **Rukachaisirikul, V.** 2022. Direct synthesis of tetrahydropyran-4-ones via  $O_3$ ReOH-catalyzed Prins cyclization of 3-chlorohomoallylic alcohols. *Org Biomol Chem*, 20, 9618-9624.
32. Boonyaketguson, S., **Rukachaisirikul, V.**, Phongpaichit, S., Trisuwan, K. 2022. Limonoids and carbazole alkaloids from the twigs of *Chalcas siamensis* Tanaka. *Nat Prod Res*, 36, 122-129.
33. Saebang, Y., **Rukachaisirikul, V.**, Kaeobamrung, J. 2023. Synthesis of acetyl deoxyvasicinone analogues from 2-(4-oxopentyl)quinazolin-4(3H)-ones via linear cyclizations. *Tetrahedron Lett*, 121, 154484.
34. Ningsih, B.N.S., Rukachaisirikul, V., Phongpaichit, S., Preedanon, S., Sakayaroj, J., Muanprasat, C. 2023. A nonadride derivative from the marine-derived fungus *Aspergillus chevalieri* PSU-AMF79. *Nat Prod Res*, 37, 2311-2318.
35. Nuansri, S., **Rukachaisirikul, V.**, Muanprasat, C., Phongpaichit, S., Preedanon, S., Sakayaroj, J. 2023. Furanone, morpholinone and tetrahydrofuran derivatives from the marine-derived fungus *Talaromyces* sp. PSU-MF07. *Nat Prod Res*, 37, 3434–3442.
36. Thongpat, K., Holasut, P., Ontawong, A., Inchai, J., Duangjai, A., **Rukachaisirikul, V.**, Vaddhanaphuti, C.S., Tadpetch, K. 2023. Synthesis and potential antidiabetic and lipid-lowering activities of putative asperidine B and its desmethyl analogue. *Bioorg Med Chem Lett*, 93, 129437.
37. Pongkorsakol, P., Yimnual, C., Satianrapapong, W., Worakajit, N., Kaewin, S., Saetang, P., **Rukachaisirikul, V.**, Muanprasat, C. 2023. Discovery of fungus-derived nornidulin as a novel TMEM16A inhibitor: A potential therapy to inhibit mucus secretion in asthma. *J Exp Pharmacol*, 15, 449-466.

38. Ningsih, B.N.S., **Rukachaisirikul, V.**, Phongpaichit, S., Muanprasat, C., Preedanon, S., Sakayaroj, J., Intayot, R., Jungsuttiwong, S. 2024. Talarostatin, a vermistatin derivative from the soil-derived fungus *Talaromyces thailandensis* PSU-SPSF059. *Nat Prod Res*, 38, 2535–2542.