Natapol Pornputtapong

Curriculum Vitae

Biochemistry & Microbiology Department,
Faculty of Pharmaceutical Sciences,
Chulalongkorn University
254, Phrayathai Rd. Wangmai, Pathumwan, Bangkok, Thailand
+66 (89) 174 5988
+66 (2) 218 8382
natapol.p@chula.ac.th
https://connex.chula.ac.th/profile/Natapol+Pornputtapong

Experiences

2021 — **Head of Biochemistry & Microbiology Department**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

2020 — **Assistant Professor**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

2017 – 2021 — **Assistant Dean in Educational Innovation**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

2016 – 2020 — **Lecturer**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

2014 – 2017 — **Post-Doctoral Associate, Krauthammer Lab**, *Yale School of Medicine*, New Haven, CT, US.
Cancer Genomics, Bioinformatics

2008 – 2010 — **Research Assistant**, *Systems Biology and Bioinformatics, PDTI, KMUTT*, Bangkok, Thailand.
Bioinformatics

2004 – 2008 — **Research Assistant**, *National Center of Genetic Engineering and Biotechnology*, Pathumthani, Thailand.
Protein engineering, Bioinformatics

Educational Background

2010 – 2014 — **PhD Bioscience**, *Chalmers University of Technology*, Gothenburg, Sweden.

2006 – 2008 — **MSc Biomedicinal Chemistry**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

1999 – 2004 — **BSc Pharmaceutical Sciences**, *Faculty of Pharmaceutical Sciences, Chulalongkorn University*, Bangkok, Thailand.

Research Interests

Systems & Synthetic biology
- Yeast Secretory System
- Systems Immunology
- AI development for data analysis

Precision medicine
- Pharmacomicrobiomics
- Cancer Peptide Vaccine
- Parkinson's Disease

Systematic Biology
- Thai herbal identification database
- Fungal identification

Research Projects

2016 – 2018 **Immunogenicity Landscape of Somatic Mutations in Cancer**.

ROLE Principal Investigator

FUNDING AGENGY Research Grant for New Scholar, The Thailand Research Fund

Affiliations

Scientific

THAILAND Principal Investigator, *Center of Excellence in Systems Biology Chulalongkorn University*

THAILAND Principal Investigator, *Center of Excellence in DNA Barcoding of Thai Medicinal Plants Chulalongkorn University*

Professional

THAILAND Registered Pharmacist, *The Pharmacy Council of Thailand*

THAILAND Member, *Thai Industrial Pharmacist Association (TIPA)*

Languages

Thai Native

English Basic fluent

Skills

Programming Python, Ruby, R, SQL Databases, LaTeX

Publications

[1] I. Iksen, W. Witayateeraporn, T. Wirojwongchai, C. Suraphan, N. Pornputtapong, N. Singharajkomron, H.M. Nguyen, and V. Pongrakhananon. Identifying molecular targets of aspiletrein-derived steroidal saponins in lung cancer using

network pharmacology and molecular docking-based assessments. *Scientific Reports*, 13(1), 2023. cited By 0.

[2] S.K.J. Urumarudappa, C. Tungphatthong, J. Jaipaew, N. Pornputtapong, D. Pakdeesattayapong, S. Vimolmangkang, and S. Sukrong. Development of a dna barcode library of plants in the thai herbal pharmacopoeia and monographs for authentication of herbal products. *Scientific Reports*, 12(1), 2022. cited By 1.

[3] S.Y. Khin, H.M.S.H. Soe, C. Chansriniyom, N. Pornputtapong, R. Asasutjarit, T. Loftsson, and P. Jansook. Development of fenofibrate/randomly methylated -cyclodextrin-loaded eudragit® rl 100 nanoparticles for ocular delivery. *Molecules*, 27(15), 2022. cited By 3.

[4] D. Thanakitpipattana, S. Mongkolsamrit, A. Khonsanit, W. Himaman, J.J. Luangsa-Ard, and N. Pornputtapong. Is hyperdermium congeneric with ascopolyporus? phylogenetic relationships of ascopolyporus spp. (cordycipitaceae, hypocreales) and a new genus neohyperdermium on scale insects in thailand. *Journal of Fungi*, 8(5), 2022. cited By 2.

[5] V.I. Machimbirike, N. Pornputtapong, S. Senapin, E. Wangkahart, P. Srisapoome, P. Khunrae, and T. Rattanarojpong. A multi-epitope chimeric protein elicited a strong antibody response and partial protection against edwardsiella ictaluri in nile tilapia. *Journal of Fish Diseases*, 45(1):1–18, 2022. cited By 6.

[6] H.E.E. Khine, G.A.U. Ecoy, S. Roytrakul, N. Phaonakrop, N. Pornputtapong, E. Prompetchara, P. Chanvorachote, and C. Chaotham. Chemosensitizing activity of peptide from lentinus squarrosulus (mont.) on cisplatin-induced apoptosis in human lung cancer cells. *Scientific Reports*, 11(1), 2021. cited By 7.

[7] N. Boonyuen, C. Chuaseeharonnachai, S. Nuankaew, P. Kwantong, N. Pornputtapong, N. Suwannarach, E.B. Gareth Jones, and S. Somrithipol. Novelties in fuscosporellaceae (fuscosporellales): Two new parafuscosporella from thailand revealed by morphology and phylogenetic analyses. *Diversity*, 13(11), 2021. cited By 5.

[8] C. Chuaseeharonnachai, K. Boonmee, J. Suwanprateep, S. Somrithipol, N. Pornputtapong, and N. Boonyuen. Prescreening of ligninolytic enzyme-producing edible white-rot fungi. *Chiang Mai Journal of Science*, 48(3):808–826, 2021. cited By 1.

[9] A. Ngampanya, U. Udomnilobol, P. Sermsappasuk, N. Pornputtapong, B. Ongpipattanakul, N. Patel, S. Jianmongkol, and T. Prueksaritanont. Development and qualification of a physiologically based pharmacokinetic model of finasteride and minoxidil following scalp application. *Journal of Pharmaceutical Sciences*, 110(5):2301–2310, 2021. cited By 4.

[10] H.T. San, N. Chatsumpun, T. Juengwatanatrakul, N. Pornputtapong, K. Likhitwitayawuid, and B. Sritularak. Four novel phenanthrene derivatives with -glucosidase inhibitory activity from gastrochilus bellinus. *Molecules*, 26(2), 2021. cited By 4.

[11] W. Arunmanee, M. Duangkaew, P. Taweecheep, K. Aphicho, P. Lerdvorasap, J. Pitchayakorn, C. Intasuk, R. Jiraratmetacon, A. Syamsidi, P. Chanvorachote, et

al.. Resurfacing receptor binding domain of colicin n to enhance its cytotoxic effect on human lung cancer cells. *Computational and Structural Biotechnology Journal*, 19:5225–5234, 2021. cited By 2.

[12] P. Panyakaew, N. Pornputtapong, and R. Bhidayasiri. Using machine learning-based analytics of daily activities to identify modifiable risk factors for falling in parkinson's disease. *Parkinsonism and Related Disorders*, 82:77–83, 2021. cited By 1.

[13] N. Pornputtapong, D.A. Acheampong, P. Patumcharoenpol, P. Jenjaroenpun, T. Wongsurawat, S.-R. Jun, S. Yongkiettrakul, N. Chokesajjawatee, and I. Nookaew. Kitsune: A tool for identifying empirically optimal k-mer length for alignment-free phylogenomic analysis. *Frontiers in Bioengineering and Biotechnology*, 8, 2020. cited By 5.

[14] P. Phloyphisut, N. Pornputtapong, S. Sriswasdi, and E. Chuangsuwanich. Mhcseqnet: A deep neural network model for universal mhc binding prediction. *BMC Bioinformatics*, 20(1), 2019. cited By 34.

[15] K. Wanichthanarak, S. Jeamsripong, N. Pornputtapong, and S. Khoomrung. Accounting for biological variation with linear mixed-effects modelling improves the quality of clinical metabolomics data. *Computational and Structural Biotechnology Journal*, 17:611–618, 2019. cited By 21.

[16] C. Chuaseeharonnachai, S. Somrithipol, S. Suetrong, A. Klaysuban, N. Pornputtapong, E.B. Gareth Jones, and N. Boonyuen. Conioscypha nakagirii, a new species from naturally submerged wood in thailand based on morphological and molecular data. *Mycoscience*, 58(6):424–431, 2017. cited By 8.

[17] R. Lazova, N. Pornputtapong, R. Halaban, M. Bosenberg, Y. Bai, H. Chai, and M. Krauthammer. Spitz nevi and spitzoid melanomas: Exome sequencing and comparison with conventional melanocytic nevi and melanomas. *Modern Pathology*, 30(5):640–649, 2017. cited By 42.

[18] C.S. Boddupalli, N. Bar, K. Kadaveru, M. Krauthammer, N. Pornputtapong, Z. Mai, S. Ariyan, D. Narayan, H. Kluger, Y. Deng, et al.. Interlesional diversity of t cell receptors in melanoma with immune checkpoints enriched in tissue-resident memory t cells. *JCI Insight*, 1(21), 2016. cited By 94.

[19] C.D. Robles-Espinoza, N.D. Roberts, S. Chen, F.P. Leacy, L.B. Alexandrov, N. Pornputtapong, R. Halaban, M. Krauthammer, R. Cui, D. Timothy Bishop, et al.. Germline mc1r status influences somatic mutation burden in melanoma. *Nature Communications*, 7, 2016. cited By 86.

[20] X. Wang, M. Chen, X. Yu, N. Pornputtapong, H. Chen, N.R. Zhang, R.S. Powers, and M. Krauthammer. Global copy number profiling of cancer genomes. *Bioinformatics*, 32(6):926–928, 2016. cited By 3.

[21] M. Krauthammer, Y. Kong, A. Bacchiocchi, P. Evans, N. Pornputtapong, C. Wu, J.P. McCusker, S. Ma, E. Cheng, R. Straub, et al.. Exome sequencing identifies recurrent mutations in nf1 and rasopathy genes in sun-exposed melanomas. *Nature Genetics*, 47(9):996–1002, 2015. cited By 264.

[22] N. Pornputtapong, I. Nookaew, and J. Nielsen. Human metabolic atlas: An online resource for human metabolism. *Database*, 2015, 2015. cited By 58.

[23] N. Pornputtapong, K. Wanichthanarak, A. Nilsson, I. Nookaew, and J. Nielsen. A dedicated database system for handling multi-level data in systems biology. *Source Code for Biology and Medicine*, 9(1), 2014. cited By 2.

[24] I. Nookaew, M. Papini, N. Pornputtapong, G. Scalcinati, L. Fagerberg, M. Uhlén, and J. Nielsen. A comprehensive comparison of rna-seq-based transcriptome analysis from reads to differential gene expression and cross-comparison with microarrays: A case study in saccharomyces cerevisiae. *Nucleic Acids Research*, 40(20):10084–10097, 2012. cited By 221.

[25] R. Agren, S. Bordel, A. Mardinoglu, N. Pornputtapong, I. Nookaew, and J. Nielsen. Reconstruction of genome-scale active metabolic networks for 69 human cell types and 16 cancer types using init. *PLoS Computational Biology*, 8(5), 2012. cited By 291.

[26] S. Chumningan, N. Pornputtapong, K. Laoteng, S. Cheevadhanarak, and C. Thammarongtham. 3d structure modeling of a transmembrane protein, fatty acid elongase. *Communications in Computer and Information Science*, 115 CCIS:36–45, 2010. cited By 0.

[27] T. Srisuk, N. Pornputtapong, S. Cheevadhanarak, and C. Thammarongtham. Prediction of non-coding rna and their targets in spirulina platensis genome. *Communications in Computer and Information Science*, 115 CCIS:106–117, 2010. cited By 3.