



KWANG MO YANG

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PROFESSIONAL APPOINTMENT

Lecturer	2025
ASEAN Institute for Health Development, Mahidol University	

EDUCATION

Ph.D. in Biology	2022
Department of Biology, Faculty of Science, Mahidol University, Thailand	
M.Sc. in Environmental Biology	2018
Department of Biology, Faculty of Science, Mahidol University, Thailand	
B.Sc. in Biological Science	2015
Mahidol University International College, Thailand	

EXPERTISE / AREAS OF RESEARCH INTEREST

- Environmental remediation
- Environmental health and toxicology
- Plant-microbial interaction
- Medicinal plants

WORKING AND RESEARCH EXPERIENCE

Lecturer	2025 – current
ASEAN Institute for Health Development, Mahidol University	
Foreign expert level 3	2025 (May - Sept)
ASEAN Institute for Health Development, Mahidol University	
Post-doctoral Researcher	2024-2025
Center of Excellence on Environmental Health and Toxicology (EHT), Thailand	
Research Assistant	2018-2022
• “Phytoremediation of petroleum hydrocarbons” - Funded by EHT • “Environmental monitoring in MapTaPhut Industrial Estate” - Funded by EHT • “Phytoremediation of E-waste contaminated soil” - Funded by EHT	

- “Biosensor Project” - Funded by National Research Council of Thailand (NRCT)
- “EarthEnzyme Project” - Funded by Earthologygroup

PUBLICATIONS LIST

- Changsiriwatana S, **Yang KM**, Poolpak T, Pokethitiyook P. (2025). Influence of crabgrass root exudates on the hydrocarbons degrading microorganisms in crude oil contaminated soil. *App. Envi. Res.* 47(4): 038
- **Yang KM**, Poolpak T, Saengwilai P, Pokethitiyook P, Kruatrachue M. (2025). Co-metabolic breakdown of LDPE microplastics in PGPR-Assisted phytoremediation of hydrocarbon-contaminated soil. *Int J Phytoremediation. In Press*
- **Yang KM**. 2025. Recent trend in phytoremediation of petroleum hydrocarbon contaminated soil: a bibliometric review. *Int J Phytoremediation. In Press*
- Kang M, **Yang KM**, Stanly C, Pant A. 2025. Potential use of plant secondary metabolites in the treatment of allergic respiratory diseases (ARDs). *Mol Biol Rep* 52, 639.
- Choden P, Poolpak T, Pokethitiyook P, **Yang KM**, Kruatrachue M 2025. In situ bioaugmented phytoremediation of cadmium and crude oil co-contaminated soil by *Ocimum gratissimum* in association with PGPR *Micrococcus luteus* WN01. *Int J Phytoremediation*, 27(3): 298-306.
- Buranasudja V, Sanookpan K, Vimolmangkang S, Binalee A, Mika K, Krobthong S, Kerdsomboon K, Kumkate S, Poolpak T, Kidhakarn S, **Yang KM**, Limcharoensuk T, and Auesukaree C. 2024. Pretreatment with aqueous *Moringa oleifera* Lam. leaf extract prevents cadmium-induced hepatotoxicity by improving cellular antioxidant machinery and reducing cadmium accumulation. *Heliyon*. 10 (18): e37424
- Joradon P, Poolpak T, Kruatrachue M, **Yang KM**, Saengwilai P, Upatham S, Pokethitiyook P. 2024. Phytoremediation technology for recovery of Ni by *Acacia* plants in association with *Bacillus amyloliquefaciens* isolated from E-waste contaminated site. *Int J Phytoremediation*. 26(6): 903-912.
- **Yang KM**, Poolpak T, Pokethitiyook P, Kruatrachue M. 2024. Risk assessment and biodegradation potential of PAHs originating from Map Ta Phut industrial estate, Rayong, Thailand. *Environ Technol.* 45(12), 2348–2362.
- Manan A, Roytrakul S, Charoenlappanit S, Poolpak T, Ounjai P, Kruatrachue M, **Yang KM**, and Pokethitiyook P. 2023. Glyphosate metabolism in *Tetrahymena thermophila*: a shotgun proteomic analysis approach. *Environ Toxicol.* 38(4): 867- 882.
- **Yang KM**, Poolpak T, Pokethitiyook P, Kruatrachue M. 2022. Assessment of dynamic microbial community structure and rhizosphere interactions during bioaugmented phytoremediation of petroleum contaminated soil by a newly designed rhizobox system. *Int J Phytoremediation*. 24(14): 1505-1517.

- **Yang KM**, Poolpak T, Pokethitiyook P. 2022. The effect of LDPE microplastics on soil metabolic activities and microbial community profile. *EnvironmentAsia (Special Issue)*. 15: 10-16 8.
- **Yang KM**, Poolpak T, Pokethitiyook P, Kruatrachue M, Saengwilai P. 2022. Responses of oil degrader enzyme activities, metabolism, and degradation kinetics to bean root exudates during rhizoremediation of crude oil contaminated soil. *Int J Phytoremediation*. 24(1): 101-109.

BOOKS/CHAPTERS

- **Yang KM**, Poolpak T, Pokethitiyook P. (2023). Rhizodegradation: The Plant Root Exudate and Microbial Community Relationship. In: Newman L, Ansari A A, Gill S S, Naeem M, Gill R (eds) *Phytoremediation*. Springer, Cham. doi:10.1007/978-3-031-17988-4_11

CONFERENCE

Conference Oral Presentation

- **Yang KM**, Poolpak T, Pokethitiyook P. (2021) The effect of LDPE microplastics on soil metabolic activities and microbial community profile, at the 6th Environment Asia Virtual International Conference, December 20-21, 2021, Thailand.
- **Yang KM**, Pokethitiyook P, Kruatrachue M, Poolpak T, Saengwilai P. The effects of leguminous root exudates on oil biodegrading bacterial species *Micrococcus luteus* WN01 in vitro, at 10th Annual conference of Center of Excellence on Environmental Health and Toxicology, November 19, 2017, Thailand

Conference Poster Presentation

- **Yang KM**, Poolpak T, Pokethitiyook P, Kruatrachue M, Saengwilai P. Co-sequential production of essential oil and bioethanol from lemongrass biomass after phytoremediation of petroleum hydrocarbons: The waste to wealth concept, at 13th Annual conference of Center of Excellence on Environmental Health and Toxicology, October 8, 2022, Thailand
- **Yang KM**, Pokethitiyook P, Kruatrachue M, Saengwilai P, Poolpak T (2018) Mung bean and cowpea root exudates facilitate PAH degradation of *Bacillus cereus* W2301, at 11th Annual conference of Center of Excellence on Environmental Health and Toxicology, November 17, 2018, Thailand.

AWARDS AND HONORS

- Best oral presentation at the 6th Environment Asia Virtual International Conference, December 20-21, Thailand
- Best oral presentation at 10th Annual conference of Center of Excellence on Environmental Health and Toxicology on “Environmental Health: The Road to Thailand 4.0”, November 19, Thailand.

CERTIFICATIONS

- Environmental remediation
- Environmental health and toxicology
- Plant-microbial interaction
- Medicinal plants

PEER REVIEW ACTIVITIES

- Journal Reviewer for *International Journal of Phytoremediation*, *Plant and Soil*, *Biochar*, *Frontiers in Microbiology*, *Frontiers in Plant Science*, *Journal of Hazardous Materials Advances*, etc.

PROFESSIONAL SERVICE

- Topic Coordinator, "Microbial Strategies for Phytoremediation Enhancement" Research Topic, *Frontiers in Microbiology* (2025)