

NUCHADA MANEEJANTRA

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EDUCATION:

University of California, Davis

- **PhD program in Horticulture and Agronomy (2018 – present)**

PhD's Thesis: Roles of photorespiration and the phosphorylated pathway of serine biosynthesis in the response(s) of poplar to salinity

Mahidol University, Bangkok, Thailand

- **Master of Science (Biotechnology) (2011-2015)**

Master's Thesis: Biochemical and Bioactivity Analysis of *Andrographis paniculata* (Burm. F.) Wall. ex Nees Crudes

Advisor: Associate Professor Kanyaratt Supaibulwatana

- **Bachelor of Science (Biotechnology) (2007-2011)**

Research Project: Effect of Gibberellic acid and Paclobutrazol on Andrographolide and Qualitative and Quantitative Secondary Metabolites in *Andrographis paniculata* (Burm. f.) Wall. ex Nees

Advisor: Associate Professor Kanyaratt Supaibulwatana

RESEARCH HIGHLIGHTS

Mahidol University, Bangkok, Thailand

Graduate Student with Assoc.Prof. Kanyaratt Supaibulwatana

- Validated the sequential extraction method for *Andrographis paniculata* and identified the biochemical compositions of its extracts using Thin Layer Chromatography (TLC), High Performance Liquid Chromatography (HPLC), and Gas Chromatography – Mass Spectrometry (GC-MS)
- Examined the antibacterial activities of *A. paniculata* extracts obtained from Gibberellic Acid, and Paclobutrazol treatments
- Determined the possibility of the metabolic flux in *A. paniculata* from different treatments and the correlation between antibacterial activities and the variations of compounds in the extracts
- Investigated the possible target of Andrographolide, the main bioactive compound of *A. paniculata* using the library of yeast *Saccharomyces cerevisiae* mutants by replica plating method

Chiba University, Chiba, Japan

Research Student with Assoc.Prof. Satoru Tsukagoshi and Assoc.Prof. Wataru Yamori

- Established hydroponic cultivation for spinach (*Spinacia oleracea* L.) using Deep Flow Technique (DFT) and identified the mineral concentrations (N, P, K, Ca, Mg, and S) to determine the nutrient requirement of hydroponic spinach

ACADEMIC PUBLICATIONS

- Karaket, N., **Maneejantra, N.**, Tuchida, P., Kunapin J., Auesukaree, C. & Supaibulwatana, K. (2018). Metabolic disturbance and phytochemical changes in *Andrographis paniculata* and possible action mode of andrographolide. *Asian Pacific Journal of Tropical Biomedicine*, 8, 85-91.
- **Maneejantra, N.**, Tsukagoshi, S., Lu, N., Supaibulwatana, K., Takagaki, M. & Yamori, W. (2016). A Quantitative Analysis of Nutrient Requirements for Hydroponic Spinach (*Spinacia oleracea* L.) Production under Artificial Light in a Plant Factory. *Journal of Fertilizers & Pesticides*, 7,170. doi: 10.4172/2471-2728.1000170.
- Worakan, P., Karaket, N., **Maneejantra, N.** & Supaibulwatana, K. (2016). A Phenylurea Cytokinin, CPPU, Elevated Reducing Sugar and Correlated to Andrographolide Contents in Leaves of *Andrographis paniculata* (Burm. F.) Wall. Ex Nees. *Applied Biochemistry and Biotechnology*, 181, 638–649.

PRESENTATIONS

- **Maneejantra, N.,** Tuchinda, P. & Supaibulwatana, K. (2014). Phytochemical Compounds and Anti - *Staphylococcus aureus* Activity Detected in Leaf Extracts of *Andrographis paniculata* Obtained from Different Solvents of Sequential Extraction. Mahidol University Research Expo 2014: MU Looks to The Future, 1-2 December 2014, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand. (Poster presentation, Proceeding)
- **Maneejantra, N. &** Supaibulwatana, K. (2011). Effect of Gibberellic acid and Paclobutrazol on Andrographolide and Qualitative and Quantitative Secondary Metabolites in *Andrographis paniculata* (Burm. f.) Wall. ex Nees. The 12th Science Project Exhibition, 10 March 2011, Faculty of Science, Mahidol University, Bangkok, Thailand. (Poster presentation)

TRAINING AND SPECIAL COURSES

- Training “Asia Environmental Horticulture Expert Program”, Graduate School of Horticulture, Chiba University, Japan, October 2013 – October 2014 (sponsored by Japan Student Services Organization (JASSO) scholarship)
- Training “Short - stay Program”, Plant culture and breeding laboratory, Graduate School of Horticulture, Chiba University, Japan, March 2013 (sponsored by Japan Student Services Organization (JASSO) scholarship)

EXTRACURRICULAR ACTIVITIES

- Participated the Famine activity for underprivileged children under the World Vision Foundation of Thailand in 2012
- Participated the Brand Ambassador Contest of Graduate School, Mahidol University in 2011

PROFESSIONAL EXPERIENCES

- **Project officer at the Thailand Research Fund (2015 – 2017)**
 - Evaluate research progress and outputs of the Royal Golden Jubilee - Ph.D. grantees
 - Cooperate with international organizations for co-funding strategies
 - An editor of the Research Community Journal of the Thailand Research Fund
- **Teaching assistant for plant biotechnology course, Mahidol University (2013)**
 - Train undergraduate students on plant tissue culture techniques
- **Research assistant trainee at plant tissue culture laboratory, Botanical Garden Organization, Queen Sirikit Botanic Garden, Chiang Mai, Thailand (2010)**
 - Propagate orchids by tissue culture technique for orchid varieties protection