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Positions: Research Scientist III, Research Laboratory of Biotechnology, Chulabhorn
Research Institute

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Research Experience (Specialties)

Plant genetic engineering and Molecular genetic in plant

Education and Degrees

1975-1978 B.Sc. (Plant Pathology) Kasetsart University Thailand

1978-1981 M.Sc. (Microbiology) Kasetsart University Thailand

1988-1991 Ph D. (Virology) Australian National University Australia

Awards

2009 Innovative Awards, Kasetsart University

2010 Research Invention Awards, National Research Council of Thailand

2014 Thailand Toray Science Foundation (TTSF)

2023 Outstanding Kasetsart University Alumni

Training Workshop

1983 Training at Asian Vegetable Development Center, Tainan, Taiwan, on Vegetable diseases for 2 months

1985 Training at Akita Prefectural College of Agriculture, Akita Prefecture, Japan on Monoclonal antibody
technics for plant virus research for 2 months

1992 Training at Department of Molecular Genetics, National Institute of Agrobiological Resources, Tsukuba,
Japan on Genomic study of floricula gene, FLO (flower tissue specific) of rice and gene
transformation of rice using electroporation for 4 months

2010 Proteomic analysis, Max Planck Institute for Biology of Ageing, Germany for 5 days

Publications

1. Bhinija, K., **Huehne, P. S.**, Mongkolsuk, S., Sitthimonchai, S., Satayavivad, J.. 2022. A short-chain dehydrogenase/reductase (SDR) detection for the *isoflavone reductase* gene in *Bulbophyllum* and other orchids. South African Journal of Botany 144 (2022) 295-304 <https://doi.org/10.1016/j.sajb.2021.08.034>
2. Bhinija, K., **Huehne, P. S.**, Prawat, H., Ruchirawat, S. 2021. The rhizome of *Bulbophyllum* orchid is the rich source of cytotoxic bioactive compounds, a potential anticancer agent. South African Journal of Botany 141: 367-372. <https://doi.org/10.1016/j.sajb.2021.05.013>
3. Panjaworayan, Nattanan, T-Thienprasert, Jiraroj, Ruangtong, Jittiporn, Jaithon, Thitiradsadakorn, **Huehne, P.S.**, Piasai, Onuma. Large scale synthesis of green synthesized Zinc Oxide nanoparticles from banana peel extracts and their inhibitory effects against *Colletotrichum* sp., Isolate KUFC 021, causal agent of anthracnose on *Dendrobium* orchid. Journal of Nanomaterials Volume 2021, Article ID 5625199, 10 pages. <https://doi.org/10.1155/2021/5625199>
4. Lokkamlue N. and **Huehne P. S.** (2020). Analyses of accumulation pattern of 1- aminocyclopropane -1- carboxylate oxidase (ACO) and ethylene response sensor (ERS) transcripts fully-opened flower and emasculature in flower development of Vanda Miss Joaquim. Science and Technology Asia. 25(2):112-22.
5. Pangjai, Wuthipong, **Huehne, Pattana Srifah.** 2021. Gamma-ray induced morphological changes in rain Lily (*Zephyranthes* spp.) Khon Kaen. Agriculture Journal. 49 (3): 643-655. <https://doi.org/10.14456/kaj.2021.57>.

6. **Huehne P.S.**, Bhinija K., Srisomsap C., Chokchaichamnankit D., Weeraphan, C., Svasti J., Mongkolsuk S. 2020. Detection of super oxide dismutase (CU-Zn) isoenzymes in leaves and pseudobulbs of *Bulbophyllum morphologlorum* Kraenzl orchid by comparative proteomic analysis. *Biochem Biophys Rep.* 22: 100762.
7. Niyomtham, Krittiya, Bhinija, Kisana, **Huehne, P.S.**. 2018. A direct gene transferring system for *Oncidium* orchids, a difficult crop for genetic transformation. *Agriculture and Natural Resources.* 52(5): 424–429.
8. Kaewphalug, W., **Huehne, P.S.**, Sriboonlert, A. 2016. Characterization of CONSTANS-like gene from pigeon orchid (*Dendrobium crumenatum* Swartz) and its expression under different photoperiod conditions. *The Horticulture Journal* doi: 10.2503/hortj.MI-123
9. Pangjai, W., **Huehne, P.S.** 2015. An analysis of cis-acting regulatory elements related to light response in the 5' flanking region of the *Ascocenda* and *Dendrobium* actin genes *Kasetsart Journal (Natural Science)* 49:174–187.
10. Pangjai, W., **Huehne, P.S.** 2015. The variable amino acid sequences in the S-loop and target binding site of the vegetative actin from the *Ascocenda* orchid flower. *Journal of Plant Biochemistry and Biotechnology* 24(4):408–416. Doi:10.1007/s13562-014-0291-5.
11. Petchthai, U., Anchalee, C., **Huehne, P.S.** 2015. Recovery of virus-infected *Dendrobium* orchids by constitutive expression of the cymbidium mosaic virus coat protein gene. *Plant Cell, Tissue and Organ Culture* 120:597–606. Doi:10.1007/s11240-014-0626-x.
12. Petchthai, U., Peng, D., **Huehne, P. S.** 2015. The bias in small RNA profiles between symptomless *Dendrobium* and severe symptom *Ascocenda* orchids infected long-term with *Cymbidium* mosaic virus. *Plant Molecular Biology Reporter (Plant Mol Biol Rep)* 33:819–828. Doi:10.1007/s11105-014-0780-7.
13. Peyachoknagul, S., Mongkolsiriwatana, C., Wannapinpong, S., **Huehne, P.S.**, Srikulnatha, K. 2014. Identification of native *Dendrobium* species in Thailand by PCR-RFLP of rDNA-ITS and chloroplast DNA. *ScienceAsia* 40, 113–120. doi: 10.2306/scienceasia1513-1874.2014.40.113
14. Patipipat, P., Bhinija, K., Wongkhamprai, B., **Huehne, P. S.** 2014. Molecular cloning of *arsenate reductase* and *phytochelatin synthase* genes related to arsenic response in *Oryza sativa* L. ssp. *indica* cv. Khao Dawk Mali 105. *Thai J. Genet.* 7(1), 41–50.
15. Lokkamlue, N., **Huehne, P. S.** 2013. Molecular Biology of *Vanda* Miss Joaquim 1-aminocyclopropane-1-carboxylate oxidase gene from the most ethylene-sensitive orchid flower. *Maejo International Journal of Science and Technology.* 7 (2), 338-352.
16. Lokkamlue, N., **Huehne, P.S.** 2013. Sequence Analysis of Ethylene Response Sensor Gene isolated from *Vanda* Miss Joaquim Flowers. *Kasetsart Journal: Natural Science* 47(2), 271-284.
17. Mohamad, Z.A., Chokchaichamnankit, D., Bhinija, K., Monique, N., Paricharttanakul, N. M., Svasti, J., **Huehne, P. S.**, Srisomsap, C. 2013. Proteomic level changes in the root of *Brassica alboglabra* induced by alachlor herbicide. *African Journal of Biotechnology* 12 (20), 2840-2849.
18. Jantasuriyarat, C., Ritchuay, S., Pattarawat, P., **Huehne, P.S.**, Kate-Ngam, S., 2012. Development and transferability of EST-SSR and transferability of genomic SSR markers for genetic diversity assessment of *Doritis*. *Biochemical Systematics and Ecology* 45, 57-65.
19. **Huehne, P. S.**, Bhinija, K. 2012. Application of cryoprotectants to improve low temperature storage survival of orchid seeds. *Scientia Horticulturae* 135, 186-193.
20. Wongkhamprai, B., Sangsavang, K., Sriboonlert, A., **Huehne, P. S.** 2011. Efficiency of *Agrobacterium* transformation of pinene synthase gene isolated from kaffir lime in *Arabidopsis thaliana*. *Thai Journal of Genetics* 4(2), 85-93.
21. Mohamad, Z.A., Chokchaichamnankit, D., Bhinija, K., Paricharttanakul, N. M., Svasti, J., **Huehne, P. S.**, Srisomsap, C. 2011. Proteomic analysis of Chinese kale (*B. alboglabra*) leaves during growth. *Journal of Integrated Omics* 1, 102-107.
22. Lertwiriawong, B., Bhinija, K., **Huehne, P.S.** 2011. Sequence Analysis of the 16S rRNA-rps12 Inverted Repeat Region in Chloroplast DNA of *Dendrobium* orchids. *Kasetsart Journal – Natural Science* 45, 461-72.
23. Lertwiriawong, B., Pinthong, K., Chanpaisaeng, J., Saksoong, P., **Huehne, P.S.** 2010. Analysis of the insecticidal crystal gene type 1 of *Bacillus thuringiensis* Thai isolates affecting lepidopterans. *ScienceAsia* 36, 271–279. doi: 10.2306/scienceasia1513-1874.2010.36.271
24. Sintuprapa, W., Theeragool, G., Yongmanitchai, W., **Huehne, P.S.**, Matsushita, K. 2008 Molecular taxonomy of *acetobacter syzygii* SKU19 and characterization of its acetic acid adapted strains. *Kasetsart Journal – Natural Science* 42, 701-14.
25. Suwanaketchanatit, C., Piluek, J., Peyachoknagul, S., **Huehne, P.S.** 2007. High efficiency of stable genetic transformation in *Dendrobium* orchid via microprojectile bombardment. *Biologia Plantarum* 51, 720-727.

26. Suwanaketchanatit, C., Chaisuk, P., Piluek, J., Peyachoknagul, S., **Huehne, P.S.** 2006. Evaluation of constitutive promoters for gene expression in *Dendrobium* protocorms and flowers. Kasetsart Journal (Nat. Sci.) 40, 934-943.
27. **Huehne, P.S.**, Rungroj N., Keeratiyaangul, S. 2006. Identification of the conserved sequences at the species level of odontoglossum ringspot virus and other members of tobamoviruses by its coat protein sequence analysis. Kasetsart Journal (Nat. Sci.) 40(2), 376-387.
28. **Huehne, P.S.**, Eurjirapongpun, P., Jampatong, C. 2006. Transformation of chitinase gene in Thai sweet corn inbred lines using particle bombardment and *Agrobacterium*. Agriculture Sci. J. 37(4), 375-384.
29. Bhinija, K., Ruengverayut, S., Loprasert, S., **Huehne, P.S.** 2004. Development of a minimal medium to prolong the subculturing period of *Vanda*, *dendrobium* and *Coelogyne* orchids *in vitro*. Agriculture Sci. J. 35(3-4), 97-103.
30. Arayaskul, N, **Srifah, P.**, Piluek, C. 2003. Detection of potexvirus and tobamovirus causing diseases in orchids. Agriculture Sci. J. 33(4-5), 173-186.
31. Adams, R.P., Zhong, M., **Srifah, P.**, Sanduen, N. 1999. DNA Genetics Diversity and Systematics of *Vetiveria zizanioides* (Poaceae). Phytologia 85, 85-95.
32. **Srifah, P.**, Loprasert, S., Rungrol, N. 1996. Use of Reverse Transcription-Polymerase Chain Reaction for Cloning of Coat Protein-encoding Genes of Cymbidium Mosaic Virus. Gene. 179, 105-107.
33. **Srifah, P.**, KEESE, P., Weiller, G., Gibbs, A. 1992. Comparisons of the Genomic Sequences of Erysimum Latent Virus and other Tymoviruses. Journal of General Virology. 73, 1437-1447.

Thesis

1. Gibbs, A., Gibbs, J., Mackenzie, A., Mo, J.S., Osorio-Keese, M., **Srifah, P.**, Torronen, M., Weiller, G. 1991 The molecular phylogenetic of the virion protein of Tymoviruses. Virology
2. Ding, S, Howe, J, Keese, P., Mackenzie, A., Skotnicki, M., **Srifah, P.**, Torronen, M., Gibbs, A. 1990. The Tymobox, a sequence shared by most tymoviruses: its use in molecular studies of Tymoviruses. Nucleic Acids Research. 18, 1181-1187.
3. Gibbs, A., Ding, S, Howe, J, Keese, P., Mackenzie, A., Skotnicki, M., **Srifah, P.**, Torronen, M. 1990. Old versus new characters for systematic: Cautionary tales from virology. Aust. Syst. Bot. 3, 159-163.