

Curriculum Vitae

Name: Krittaya Petchpoung, Ph.D
Position: Researcher, Senior Professional Level
Tel: 029-428-740 ext. 508
E-mail: rdikyp@ku.ac.th

EDUCATION

2009 Ph.D (Toxicology), Mahidol University, Thailand
1998 M.Sc (Biochemistry), Mahidol University, Thailand
1995 B.Sc (Agriculture) Second Class Honors, Kasetsart University, Thailand
2022 B.Sc (Occupational Health and Safety), Sukhothai Thammathirat Open University, Thailand

TRAINING

2022 Peer evaluation laboratory auditor, NRCT and Mahidol University, Thailand
2021 TIS2677-2015 Introduction and Internal auditor, MASCI, Thailand
2021 ISO/IEC 17025 Internal auditor, MASCI, Thailand
2020 ISO/IEC 17025 Internal auditor, National Institute of Metrology, Thailand
2004 Mycotoxin Inspection In Food, JICA, Japan

PROFESSIONAL EXPERIENCE

1999 - present Scientific Equipment and Research Division, Kasetsart University, Thailand

AREA OF EXPERTISE

- Lab safety, toxicology and risk assessment
- Enzyme extraction and Analysis
- Chromatography
- Oxidative stress

- Genetic polymorphism & Molecular biomarkers

RESEARCH GRANT

As Director of Project:

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| 2022 | Development of determination methods for active components and contaminants in Thai herbal medicine for medical and agro-industrial utilization |
| 2014-2015 | Potential for bioremediation of persistence residual compounds from agriculture and industry in environment |

As Head of Project:

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| 2025 | PR of laboratory safety standard phase 8 |
| 2022 | Development of prediction methods from color parameter for active components and antioxidant activity in Thai medicinal herb |
| 2022 | Development of cassava cyanide determination method and portable test kit by color chart and digital photo |
| 2021 | Host University Project on Laboratory Safety Standards, Year 2021: Kasetsart University |
| 2022 | PR of laboratory safety standard phase 5: 2020 |
| 2019 | PR of laboratory safety standard phase 4: 2019 |
| 2014-2015 | Potential for phytoremediation of organochlorine in environment with <i>Aeschynomene</i> spp |
| 2011 | Responses of oxidative stress caused by salinity in various varieties of Thai rice, Research and Development Institute, Kasetsart University Grant |
| 2010 | Toxicological Effects of Zearalenone to Immunological and Histological Changes of Vannamei Shrimp, Research and Development Institute, Kasetsart University Grant |

As Co-Researcher

2025	Development of molecular markers for the selection and breeding of high yield and nutritional soybean
2025	Research and development project for medicinal plant production for secondary metabolite value increment by tissue culture technology
2024	Innovation and its utilization of edible freshwater algae for food products and environment
2024	Research and development of a rapid test kit for agricultural residues to increase crop production efficiency
2024	Innovative extraction of high active ingredients from <i>Andrographis paniculate</i> , <i>Centella asiatica</i> , <i>Curcuma longa</i> and removal of heavy metals by novel low cost bio-adsorbent materials
2023-2024	Research and Development of cassava varieties for food industry
2023-2024	Tissue culture technology and inducing the production of active medicinal substances from medicinal plants.
2023-2024	Research and Development of Cassava Varieties for Cassava Mosaic Disease Control
2023	Host University Project on Laboratory Safety Standards, Year 2023: Kasetsart University
2023	Innovative of stable bioactive compounds production from pigmented rice
2023	The improvement of utilization from pigmented rice for health food: Risk assessment and stable bioactive compounds production
2022	PR of laboratory safety standard phase 6
2022	Biotechnology and innovation in safe crop production
2022	Research and Development of high yield and quality cassava varieties for industry
2021	Development of Laboratories Management System to Laboratory Safety based on TIS 2677-2558 for Support Agriculture and Food Standard
2018	Extraction of collagen-like protein from straw mushroom

2560	Cassava breeding for low cyanogen content and high productivity used as food industrial supply
2017	Phytochemicals and antioxidant properties of rice are colored in the northeastern part of Thailand
2016-2017	Scientific Equipment and Resource Management Map for research and academic proposes
2558-2559	Research for Quality and Agricultural Usage Development of Wood Vinegar
2015-2016	The efficiency of wood vinegar on plant growth in tissue culture
2015-2016	The factors in the production process and storage conditions affecting the quantity and chemical composition of wood vinegar, Kasetsart University Grant
2014-2015	Bioremediation of Some Organochlorine Pesticide Contaminated in Environment by Soil Fungi: Isolation and Optimization
2013	Utilization of biomass waste materials after the ark of Tung oil tree, Kasetsart University Grant
2012-2013	Cassava breeding for low cyanogen content and high productivity used as food industrial supply, National Research Council of Thailand Grant.
2010	Incidence of Mycotoxins Contamination in Shrimp Feed and Raw Materials, Research and Development Institute, Kasetsart University Grant
2010	Chemical Composition of Wood Vinegar from Different Trees, Research and Development Institute, Kasetsart University Grant

PUBLICATIONS

1. Soiklom, S., Siri-anusornsak, W., Petchpoung, K., Kansandee, W. 2024. Development of Anthocyanin-Rich Gel Beads from Colored Rice for Encapsulation and In Vitro Gastrointestinal Digestion, *Molecule*, 29,270.
2. Petchpoung, K., Soiklom, S., Siri-anusornsak, W.2024. *TRENDS IN SCIENCES*, 21(3): 7393

3. Chaicharoen A., Amawan S., Kansup J., Sawwa A., Petchpoung K. 2023. Novel SNP Markers and Their Application in Low-Cyanide Cassava (*Manihot esculenta crantz*) Breeding Program. *Trends in Sciences*, 20 (4), art. no. 6456
4. Kaewtapee C., Jantra N., Petchpoung K., Rakangthong C., Bunchasak C. 2022. Chemical composition and standardized ileal digestibility of crude protein and amino acid in whole yeast and autolyzed yeast derived from sugarcane ethanol production fed to growing pigs. *Animal Bioscience*, 35 (9), pp. 1400 – 1407
5. Soiklom S., Petchpoung K., Siri-Anusornsak W. 2021. Comparison of sample pretreatment and analytical method for nitrate determination in vegetables. *Trends in Sciences*, 18 (19), art. no. 19
6. Petchpoung K., Soiklom S., Siri-anusornsak W., Khlangsap N., Tara A., Maneeboon T. 2020. Predicting antioxidant activity of wood vinegar using color and spectrophotometric parameters *MethodsX*, 7, art. no. 100783
7. Chaengsee P., Kongsil P., Siriwong N., Kittipadakul P., Piyachomkwan K., Petchpoung K. 2020. Potential yield and cyanogenic glucoside content of cassava root and pasting properties of starch and flour from cassava Hanatee var. And breeding lines grown under rain-fed condition. *Agriculture and Natural Resources*, 54 (3), pp. 237 – 244
8. Kongsil P., Kittipadakul P., Phumichai C., Lertsuchatavanich U., Petchpoung K. 2016. Path analysis of agronomic traits of Thai cassava for high root yield and low cyanogenic glycoside. *Pertanika Journal of Tropical Agricultural Science*, 39 (2), pp. 197 – 218
9. Tanaviyutpakdee P., Yoovathaworn K., Sirivarasai J., Chanprasertyothin S., Panpunuan P., Petchpoung K., Tatsaneeyapant A., Sura T., Kaojarern S., Sritara P. 2015. Role of CYP2E1 and NQO1 polymorphisms in oxidative stress derived cancer in Thais with and without dyslipidemia. *Asian Biomedicine*, 9 (5), pp. 601 – 611
10. Srihawong W., Kongsil P., Petchpoung K., Sarobol E. 2015. Effect of genotype, age and soil moisture on cyanogenic glycosides content and root yield in cassava (*Manihot esculenta Crantz*). *Kasetsart Journal - Natural Science*, 49 (6), pp. 844 – 855
11. Sirivarasai J., Kaojarern S., Chanprasertyothin S., Panpunuan P., Petchpoung K., Tatsaneeyapant A., Yoovathaworn K., Sura T., Kaojarern S., Sritara P. 2015. Environmental lead exposure, catalase gene, and markers of antioxidant and oxidative stress relation to

hypertension: An analysis based on the EGAT study. BioMed Research International, 2015, art. no. 856319

12. Khansakorn N., Wongwit W., Tharnpoophasiam P., Hengprasith B., Suwannathon L., Petchpoung K., Yoovathaworn K., Chanprasertyothin S., Sura T., Kaojarern S., Sritara P., Sirivarasai J. 2011. Impact of GSTM1, GSTT1, GSTP1 polymorphism and environmental lead exposure on oxidative stress biomarkers. Scientific Research and Essays Vol. 6(31): 6540-6547.
13. Petchpoung, K., Kaojarern, S., Yoovathaworn, K., Sura, T. and Sirivarasai, J. 2011. The influence of metabolic gene polymorphisms on urinary 1-hydroxypyrene concentration in Thai bus drivers. Environmental Toxicology and Pharmacology 31: 160-164.
14. Sirivarasai, J., Kaojarern, S., Thanyachai, S., Yoovathaworn, K. and Petchpoung, K. 2010. Effect of CYP1A1 and EPHX1 polymorphisms on the level of BPDE-Alb adducts in PAH-environmental exposure. Toxicology Letters 196, S54-S55.

CONFERENCE PRESENTATIONS

International conferences

1. Krittaya Petchpoung, Siriwan Soiklom, Wipada Siri-anusornsak, Thanapoom Maneeboon, Adcharapun Chaicharoe, Phummarin Wanichananan. 2023. Color characteristic, active compounds and antioxidant activity of Java tea. 3rd Edition of Global Conference on Agriculture and Horticulture (Agri 2023), 11 - 13 September 2023, Kingdom of Spain
2. Ms.Chananya Chuaysrinule, Chanram Roopkham, Krittaya Petchpoung, Thanapoom Maneeboon, "Aflatoxin B1 degradation by a newly isolated endophytic fungus *Aspergillus aculeatus*", International Symposium of Mycotoxicology 2022 & International Conference of Mycotoxicology and Food Security 2022 (ISMYCO 2022 & ICM 2022), 6 - 9 September 2022, Bangkok, Thailand
3. Petchludda Chaengsee, .Pasajee Kongsil, , Nongnuch Siriwong, Sukanda Kerdee, Piya Kittipadakul, Rutai Ruangthamsing, Krittaya Petchpoung, "Food Safety and Consumption Quality Potentials of Cassava Lines Grown in Three Rain-Fed Plantation Areas in

Thailand", The 3rd Environment and Natural Resources International Conference (ENRIC 2018), 22 - 23 November 2018, Chonburi, Thailand

4. Chidchanok Pragob, Dr.Pasajee Kongsil, Sukanda Kerdee, Piya Kittipadukul, Chalernpol Phumichai, Krittaya Petchpoung, "Evaluation of Cassava Germplasm for Drought Tolerance Breeding Program in Thailand", The 3rd Environment and Natural Resources International Conference (ENRIC 2018), 22 - 23 November 2018, Chonburi, Thailand.
5. Pasajee Kongsil, Piya Kittipadukul, Chalernpol Phumichai, Vichan Vichukit, Nongnuch Siriwong, Krittaya Petchpoung, Adirake Wangsaeng, Punnasorn Ninnoree, Namtip Tongnak, "Cassava Breeding for Low Cyanogenic Potential in Thailand", World Congress on Root and Tuber Crops, 18 January - 23 February 2016, Nanning, The People's Republic of China
6. Chananya Chuaysrinule, Siriwan Soiklom, Krittaya Petchpoung, Warapa Mahakarnchanakul, Khamjut Ruenreungdee, Thanapoom Maneeboon. 2014. Detection of aflatoxins producing *Aspergillus* spp. from fish meal, soybean meal and shrimp feed in Thailand. The 10th International Mycological Congress, 3-8 August 2014 at Queen Sirikit National Convention Centre, Bangkok, Thailand.
7. Nampeung Anukul, Siriwan Soiklom, Krittaya Petchpoung, Thanapoom Maneeboon and Warapa Mahakarnchanakul. 2012. Risk incidence of mycotoxins and development of rapid detection methods in shrimp feed. Poster presentation delivered at Seminar and workshop in Establishment of an Asian Research Center of Excellence in Healthy and Safe Marine Food Resource, 2nd Symposium of TUMSAT Healthy and Safe Marine Food Resources Project, 5-7 September 2012 at Kasetsart University, Bangkok, Thailand.

National conferences

1. Notawut Jantra, Krittaya Petchpoung, Chanwit Kaewtapee. 2021. Nutritional Values and In vitro Digestibility of Protein in Yeast Products and Protein Feedstuffs, of the 18th KU KPS national conference: 8-9 December 2021, Nakhonpratom, Thailand.
2. Siriwan Soiklom, Krittaya Petchpoung, Wipada Siri-anusornsak, and Chanram Roopkham 2019. "Quantitative Analysis of Indole-3-Acetic Acid in Bacterial Culture Media Extract

using HPLC", of the 57th Kasetsart University Annual Conference: 29 January - 2 February 2019, Bangkok, Thailand.

3. Wipada Siri-anusornsak, Krittaya Petchpoung, Siriwan Soiklom and Chanram Roopkham. 2019. Relationship between Color Parameters, Total Phenolic Content and Protein Content of Local Thai Rice Varieties of 57th Kasetsart University Annual Conference: 29 January - 2 February 2019, Bangkok, Thailand.
4. Wipada Siri-anusornsak, Krittaya Petchpoung, Siriwan Soiklom Extraction and Stability of Anthocyanin from Mali Nil Rice" The 2nd Suan Sunandha National and International Academic Conference on Science and Technology "Science, Technology and Innovation for Sustainable Development (SsSci 2019), 8 November 2019, Bangkok, Thailand.
5. Siriwan Soiklom, Krittaya Petchpoung, Yupadee Powpan, Juthamanee Sangsawang, Sumpun Soiklom. 2014. Production of activated carbon from Tung Oil Tree (*Vernicia Montana* Lour) –waste for manganese removal. Proceedings of 52th Kasetsart University Annual Conference: Science, 4-7 February 2014. Kasetsart University, Bangkok. p 46-52.
6. Siriwan Soiklom, Krittaya Petchpoung, Thanapoom Maneeboon, Suwana Kladpan, Khamjut Ruenreungdee and Warapa Mahakarnchanakul. 2013. A Study of Aflatoxin and Deoxynivalenol Contamination in Shrimp Feedstuff and Shrimp Feed. Proceedings of 51th Kasetsart University Annual Conference: Fisheries, 5-7 February 2013. Kasetsart University, Bangkok. p 316-322.
7. Krittaya Petchpoung, Khamjut Ruenreungdee, Siriwan Soiklom, Thanapoom Maneeboon, Patcharee Umrung, Win Surachetpong and Warapa Mahakarnchanakul. 2013. Toxicological Effects of Zearalenone to Immunological and Histological Change of Vannamei Shrimp. Proceedings of 51th Kasetsart University Annual Conference: Fisheries, 5-7 February 2013. Kasetsart University, Bangkok. p 389-395.
8. Kladpan S., W. Mahakarnchanakul, K. Petchpoung and A. Chaicharoen. 2002. Developing of plant virus detection by RT-PCR. Poster presentation delivered at The First International Conference on Tropical and Subtropical Plant Diseases. November 5-8, 2002. The Imperial Mae Ping Hotel Chiang Mai, Thailand.
9. Krittaya Petchpoung and Montri Chulavatnatol. 1998. Active site of α -hydroxynitrile lyases from different tissues of cassava. Poster presentation delivered at the 24th Congress on

Science and Technology of Thailand, 19-21 October 1998 at Queen Sirikit National Convention Center, Bangkok, Thailand.

10. Krittaya Petchpoung and Montri Chulavatnatol. 1997. Comparative study of α -hydroxynitrile lyases from different tissues of cassava. Poster presentation delivered at the 23rd Congress on Science and Technology of Thailand, 20-22 October 1997 at The Lotus Hotel Pang Suan Kaew, Chiang Mai, Thailand.

AWARD

Outstanding researcher of Kasetsart University, 2019.