

Dr. Watanya Jarriyawattanachaikul

Curriculum Vitae

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Education

- 2018-May 2022 **Doctor of Philosophy in Interdisciplinary Veterinary Science**, Faculty of Veterinary Medicine, University of Turin, Italy
(Toxicology)
- 2013-2018 **Doctor of Philosophy in Interdisciplinary Veterinary Science**, Faculty of Veterinary Medicine, Khon Kaen University, Thailand
(Food Safety)
- 2009-2012 **Master of Science in Toxicology**, Faculty of Pharmaceutical Sciences, Khon Kaen University, Thailand
(Toxicology)
- 2004-2009 **Bachelor of Pharmacy (English program)**, Faculty of Pharmaceutical Sciences, Khon Kaen University, Thailand
(Pharmacy, Toxicology)

Doctoral Dissertation, University of Turin

- Title *Prevention of mycotoxigenesis in broilers: in vivo and in vitro studies.*
- Supervisors Prof. Paola Badino
- Description This research study is proposed to reduced the amount of mycotoxins contaminated in broilers by using antioxidant compound (curcumin; CUR) and two novel additives compounds by focusing on the possible action to the oxidative stress, cytochrome P450, and drug transporter modifications in broilers.

Doctoral Dissertation, Khon Kaen University

- Title *The study of Campylobacter spp. and mucin on colonization relation in broiler and anticolonization of Campylobacter using Thai-herbal extract.*
- Supervisors Assoc. Prof. Dr. Prapansak Chaveerach
- Description This research study is proposed to elucidate the components, functional, mechanisms of chicken mucin genes when intact with/without *Campylobacter* species and screening the herbal plants which promote the antimicrobial activity.

Master Thesis

- Title *Reduction of aflatoxin B1 by binding with lactic acid bacteria strains isolated from Thai fermented meat products.*
- Supervisors Assist. Prof. Dr. Supatra Porasuphatana
- Description This study shows the ability 26 strain of lactic acid bacteria isolated from Thai fermented food products to bind aflatoxin B1 by in vitro digestion model which is using HPLC.

Bachelor Thesis

- Title *Bioaccessibility of aflatoxin B1 in corn by in vitro digestion model.*
- Supervisors Assist. Prof. Supatra Porasuphatana
- Description This study shows the amount of aflatoxin B1 released out from the chyme (corn) by in vitro digestion model which is using HPLC.

Experience

- 2012-2013 **Internship**, *École Nationale Supérieure Agronomique de Toulouse (ENSAT)*, Toulouse, France
Role probiotique des bactéries lactiques et leur potentiel dans la prévention des Cancers hépatiques induits par l'aflatoxine B1.
- 2009 **Seminar**, *Khon Kaen University*, Khon Kaen, Thailand
Roles of lactic acid bacteria in controlling *Aspergillus* spp. and aflatoxins.
- 2008 **Internship**, *National Cancer Institute (NCI)*, Bangkok, Thailand
Micronucleus assays and cell culture techniques.
- 2008 **Special Project**, *Khon Kaen University*, Khon Kaen, Thailand
Bioaccessibility of aflatoxin B1 in corn by *in vitro* digestion model.
- 2007 **Seminar**, *Khon Kaen University*, Khon Kaen, Thailand
Telomerase targeted anticancer bioactive prodrug by anti-sense based on approach.

Computer skills

Typography L^AT_EX, LyX, Microsoft Offices, Prism Software

Languages

Thai Native fluency
English Good fluency
German B2 level
Italian A2 level

Laboratory skills

- TLC**
- Determination of drug residues in urine samples.
 - Analysis of peanut from restaurant.
 - Analysis of insecticide (paraquat).
- HPLC**
- Determination of Zearalanone by using HPLC.
 - Bioaccessibility of aflatoxin B1 in corn by under *in vitro* digestion model by using HPLC-FL.
 - Determination of aflatoxin B1 in peanuts by *in vitro* digestion model by using HPLC-FL.
 - Determination of aflatoxin B1 combined with *Lactobacillus* species using Sep-Pak® column clean-up prior to HPLC-FL.
 - Method validation for aflatoxin B1 determination in corn using Sep-Pak® column clean-up prior to HPLC-FL.
 - Method validation for aflatoxin B1 determination in peanuts using Sep-Pak® column clean-up prior to HPLC-FL.
 - Method validation for aflatoxin B1 determination in peanuts by *in vitro* digestion model using liquid-liquid extraction clean-up prior to HPLC-FL.
- UV**
- Measure growth of a bacterial culture by UV-VIS spectrophotometry.
 - Measure content of Mucin content extracted from intestinal tract (cecum, small and large intestine part) of poultry.
- PCR**
- Identification of *Campylobacter* species from contaminated foods.
 - Identification of *Campylobacter* species in cecal content of poultry.
 - Identification of Mucin gene in intestinal tract of poultry.
- Cell-line culture**
- Evaluation of protective effect of antioxidant compounds (curcumin, quercetin, and resveratrol) on aflatoxin B1 induced toxicity in AML12 cells line.
 - Evaluation of protective effect of quercetin and resveratrol on antithyroid medication and T3 induced the oxidative stress in CRFK cells line.
 - Evaluation of oxidative stress effect on methimazole and thyroid hormone in CRFK cells line.
 - *In vitro* toxicity assessments using cells culture models in CaCO-2 cells lineas human epithelial colorectal adenocarcinoma cells.
 - Evaluation of protective effect in Cratoxylum formosum extract with *Campylobacter jejuni* in CaCO-2 cells line.
 - Evaluation of incubation time effect on the binding capacity of *Lactobacillus* strains to aflatoxin B1.

Laboratory skills (*Cont.*)

Other techniques

- Determination of antioxidant activity and oxidative stress status: DPPH assay, FRAP assay, DCFH-DA assay, TBARS assay in tissue samples, oxy-adsorbent test® in chicken's and dog's serum, quantitative of GST contents in cell line.
- Evaluation of toxicity in cell line: Neutral Red Uptake assay, MTT assay.
- RNA extraction by Maxwell®.
- Protein quantification: BCA® Protein Assay Kit, Lowry protein assay.
- Antibacterial test: MIC method.
- API®50 CHL: Identification of lactobacillus strains in Thai fermented food products.
- Elisa test kit: Determination of 8-hydroxy-2'-deoxyguanosine(8-OH-dG) in urine sample of diabetes mellitus (DM).

Publications

- 2023 Amminikutty, N., Spalenza, V., **Jarriyawattanachaikul, W.**, Badino, P., Capucchio, M.T., Colombino, E., Schiavone, A., Greco, D., D'Ascanio, V., Avantaggiato, G., Dabbou, S., Nebbia, C., Girolami, F. Turmeric powder counteracts oxidative stress and reduces AFB1 content in the liver of broiler exposed to the EU maximum levels of the mycotoxin.(2023) *Toxins*, 15, 687. doi: 10.3390/toxins15120687
- 2022 Candellone, A., Girolami, F., Badino, P., **Jarriyawattanachaikul, W.**, Odore, R. Changes in the oxidative stress status of dogs affected by acute enteropathies.(2022), *Veterinary Sciences*, 6(9), 276. doi: 10.3390/vetsci9060276
- 2022 Damiano, S., **Jarriyawattanachaikul, W.**, Girolami, F., Longobardi, C., Nebbia, C., Andretta, E., Lauritano, C., Dabbou, S., Avantaggiato, G., Schiavone, A., Badino, P., Ciarcia, R. Curcumin supplementation protects broiler chickens against the renal oxidative damage induced by the dietary exposure to low levels of Aflatoxin B1.(2022), *Frontiers in Veterinary Sciences*, 8, 822227. doi: 10.3389/fvets.2021.822227
- 2021 Girolami, F., Candellone, A., **Jarriyawattanachaikul, W.**, Meineri, G., Nebbia, C., Badino, P. Protective effect of natural antioxidant compounds on methimazole induced oxidative stress in a feline kidney epithelial cell line (CRFK) (2021), *Veterinary Sciences*, 8(10), 220. doi: 10.3390/vetsci8100220
- 2020 Longobardi, C., Andretta, E., Romano, V., Lauritano, C., Avantaggiato, G., Schiavone, A., **Jarriyawattanachaikul, W.**, Florio, S., Ciarcia, R., Damiano, S. Effects of some new antioxidants on apoptosis and ROS production in AFB1 treated chickens (2020), *Medical Sciences Forum*, 2(1), 12. doi: 10.3390/CAHD2020-08640
- 2020 Andretta, W., Longobardi, C., Laselva, M., Lauritano, C., Avantaggiato, G., Schiavone, A., **Jarriyawattanachaikul, W.**, Florio, S., Damiano, S., Ciarcia, R. Protective Effects of New Antioxidants in OTA Treated Chicken Kidney (2020), *Medical Sciences Forum*, 2(1), 18. doi: 10.3390/CAHD2020-08617
- 2016 **Jarriyawattanachaikul, W.**, Chaveerach. P., and Chokesajjawatee. N. "Antimicrobial Activity of Thai-Herbal Plants Against Foodborne Pathogens E. coli, S. aureus and C. jejune." *Agriculture and Agricultural Science Procedia*, 11, 20-24, doi: 10.1016/j.aaspro.2016.12.004
- 2012 **Jariyawattanachaikul, W.** Comparison of Aflatoxin B1 Extraction Methods between Solid Phase Extraction and Liquid-Liquid Extraction, *Journal of Ramkhamhaeng University*, 29(1): 37-54.

Conference Proceeding

- 2020 Longobardi, C., Andretta, E., Romano, V., Lauritano, C., Avantaggiato, G., Schiavone, A., **Jariyawattanachaikul, W.**, Florio, S., Ciarcia, R., Damiano, S. Effects of some new antioxidants on apoptosis and ROS production in AFB1 treated chickens (2020) *The 1st International E-Conference on Antioxidants in Health and Disease*, 01-15/12/2020, doi: 10.3390/CAHD2020-08640
- 2020 Andretta, W., Longobardi, C., Laselva, M., Lauritano, C., Avantaggiato, G., Schiavone, A., **Jariyawattanachaikul, W.**, Florio, S., Damiano, S., Ciarcia, R. Protective Effects of New Antioxidants in OTA Treated Chicken Kidney (2020) *The 1st International E-Conference on Antioxidants in Health and Disease*, 01-15/12/2020, doi: 10.3390/CAHD2020-08617.
- 2019 **Jariyawattanachaikul, W.**, Candellone, A., Girolami, F., Meineri, G., De Meo, E., Nebbia, C., Badino, P. Protective effect of natural antioxidants on methimazole and T3 induced oxidative stress in a feline kidney epithelial cell line (CRFK). 23rd ESVCN Congress. 18th-20th September 2019; Turin, ITALY.

- 2019** **Jariyawattanachaikul, W.**, Candellone, A., Girolami, F., Meineri, G., De Meo, E., Nebbia, C., Badino, P. Protective effect of quercetin on Methimazole induced oxidative stress in a feline kidney epithelial cell line (CRFK). 73rd SISVET Congress. 19th-22th June 2019; Olbia, ITALY.
- 2017** **Jariyawattanachaikul, W.**, Chaveerach, P., Noppon, B., Porasupattana, P., and Chokesajjawatee, N. The Effects of Thai-herb on Campylobacter colonization. Conference: 19th International Workshop on Campylobacter, Helicobacter and Related Organisms., At La Cité de Nantes Events Center, Nantes, FRANCE, CHRO2017, 333.
- 2013** **Jariyawattanachaikul, W.**, Polkaew, P., and Kheawprachum, T. Factors Affecting to Medication Used Behaviors in Middle-Aged Persons at Champasak Province of the Lao People's Democratic Republic. The 3rd Khon Kaen University National and International Conference, 91-94.
- 2013** Polkaew, P., **Jariyawattanachaikul, W.**, and Sripan, R. Behaviors Medication used in Middle-Aged Persons at Municipality of Champasak Province of the LAO People's Democratic Republic. The 3rd Khon Kaen University National and International Conference, 542-546.
- 2011** **Jariyawattanachaikul, W.**, Porasuphatana, S., Songsermsakul, P., and Itsaranuwat, P. Binding of aflatoxin B1 lactic acid bacteria from Thai fermented foods by In vitro stud. The 23rd National Graduate Research Conference, Nakhonratchasima, Thailand, 473-477.

Certificate and Award

- Nov 2016** - (**COUSERA, Duke University, United States**) Training course in the topic "Introduction to Genetics and Evolution" a 11 weeks online non-credit course authorized by Duke University, Durham, North Carolina, United States and offered through Coursera.
- Nov 2016** - (**USAID**) Training of Leaderships and Management Skills at Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand.
- Jul 2016** - (**ICIISA**) Best 3rd Oral Presentation Award at International Conference on Inventions and Innovations for Sustainable Agriculture 2016, Cha-am, Thailand.
- Aug 2014** - (**COUSERA, The University of Chicago**) Training course in the topic "Understanding the Brain: The Neurobiology of Everyday Life" a 10 week online non-credit course authorized by The University of Chicago and offered through Coursera.
- Oct 2013** - (**COUSERA, University of California, San Francisco**) Training course in the topic "Contraception: Choices, Culture and Consequences" a 5 week online non-credit course authorized by University of California, San Francisco and offered through Coursera.

Referees

- **Prof. Paola Badino**, Faculty of Veterinary Medicine, University of Turin, Turin, ITALY, email: paola.badino@unito.it
- **Assoc. Prof. Chantana Aromdee**, Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, THAILAND, email: chaaro@kku.ac.th
- **Assoc. Prof. Prapansak Chaveerach**, Faculty of Veterinary Medicine, Khon Kaen University, Khon Kaen, THAILAND, email: chaveerach@kku.ac.th
- **Assist. Prof. Supatra Porasuphatana**, Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, THAILAND, email: psupatra@kku.ac.th