

## Dr. Usuma Jermnak

(D.V.M., Ph.D.)

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Faculty of Veterinary Medicine  
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### Position :

Associate Professor

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### Educational Background :

1997-2003 : Doctor of Veterinary Medicine (D.V.M.)(Second class honor), Kasetsart University, Bangkok, Thailand

2009-2012 : Doctor of Philosophy in Applied Biological Chemistry, University of Tokyo, Japan

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### Research Interests :

- Control and decontamination of aflatoxin in animal feedstuffs using natural products
  - Molecular biotechnology in mycotoxicology
  - Pharmacokinetics and residues of veterinary drugs and chemicals in animals and aquaculture
  - Natural products and protective agents for anticancer in animals
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### Academic Position :

2005-2016: Lecturer, Faculty of Veterinary Medicine, Kasetsart University

2016-2021: Assistant Professor, Faculty of Veterinary Medicine, Kasetsart University

2021-present: Associate Professor, Faculty of Veterinary Medicine, Kasetsart University

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### Research Publications

#### International Publications :

1. Poapolathep, A., Poapolathep, S., Jermnak, U., Imsilp, K., Wannapat, N., Sugita-Konishi, Y. and Kumagai, S. 2008. Muscle tissue kinetics of oxytetracycline following intramuscular and oral administration at two dosages to giant freshwater prawn (*Macrobrachium rosenbergii*). *J. Vet. Pharmacol. Ther.* 31(6): 517-522.
2. Poapolathep, A., Jermnak, U., Chareonsan, A., Sakulthaew, C., Klangkaew, N., Sukasem, T. and Kumagai, S. 2009. Dispositions and residue depletion of enrofloxacin and its metabolite ciprofloxacin in muscle tissue of giant freshwater prawn. *J. Vet. Pharmacol. Ther.* 32(3): 229-234.

3. Jermnak, U., Yoshinari, T., Sugiyama, Y., Tsuyuki, R., Nagasawa, H., and Sakuda, S. 2012. Isolation of methyl syringate as a specific aflatoxin production inhibitor from the essential oil of *Betula alba* and aflatoxin production inhibitory activities of its related compounds. *Int. J. Food Microbiol.* 153: 339-344.
4. Jermnak, U., Chinaphuti, A., Poapolathep, A., Kawai, R., Nagasawa, H., and Sakuda, S. 2013. Prevention of aflatoxin contamination by a soil bacterium of *Stenotrophomonas* sp. that produces aflatoxin production inhibitors, *Microbiology.* 159: 902-912.
5. Naoko, S., Tsuyuki, R., Yoshinari, T., Jermnak, U., Furukawa, T., Nagasawa, H. and Sakuda S. 2013. Correlation of ATP Citrate Lyase and Acetyl CoA Levels with Trichothecene Production in *Fusarium graminearum*. *Toxins.* 5: 2258-2269.
6. Poapolathep, A., Buranatragoon, S., Pralatnet, S., Poapolathep, S., Isariyodom, S., Jermnak, U., Imsilp, K., Tanhan, P., Klangkaew, N. 2015. Fate and tissue disposition of deoxynivalenol and zearalenone in broilers. *J Vet Pharmacol Ther.* 38 (Suppl. 1): 38-39.
7. Sakuda, S., Yoshinari, T., Furukawa, T., Jermnak, U., Takagi, K., Iimura, k., Yamamoto, T., Suzuki, M. Nagasawa, H. 2015. Search for aflatoxin and trichothecene production inhibitors and analysis of their modes of action. *Biosci. Biotechnol. Biochem.* 80(1): 43-54.
8. Suknikom, P., Jermnak, U., Poapolathep, S., Isariyodom, S., Giorgi, M., Kumagai, S., Poapolathep, A. 2016. Dispositions and tissue depletion of melamine in ducks. *J Vet Pharmacol Ther.* 39(1):90-94
9. Saengtienchai, A., Ikenaka, Y., Bortey-Sam, N., Jermnak, U., Mizukawa, H., Kawai Y. K., Nakayama S. M., Ishizuka M. 2016. The African hedgehog (*Atelerix albiventris*): Low phase I and phase II metabolism activities. *Comp Biochem Physiol C Toxicol Pharmacol.* 190:38-47.
10. Liu, X. C., Li, H. W., Jermnak, U., Yang, J. S. 2016. The complete mitogenome of the freshwater fairy shrimp *Streptocephalus sirindhornae* (Crustacea: Anostraca: Streptocephalidae). *Mitochondrial DNA A DNA Mapp,* 27(5):3189-3191.
11. Ketyam, B., Imsilp, K., Poapolathep, A., Poapolathep, S., Jermnak, U., Phaochoosak, N., Tanhan, P. 2016. Health risk associated with the consumption of duck egg containing endosulfan residues. *Environ Monit Assess.* 188(5):270.
12. Jantapan, K., Poapolathep, A., Imsilp, K., Poapolathep, S., Tanhan, P., Kumagai, S., and Jermnak, U. 2017. Inhibitory effects of Thai essential oils on potentially aflatoxigenic *Aspergillus parasiticus* and *Aspergillus flavus*. *Biocontrol Sci.* 22(1):31-40.
13. Puangkham, S., Poapolathep, A., Jermnak, U., Imsilp, K., Tanhan, P., Chokejaroenrat, C., and Poapolathep, S. 2017. Monitoring and health risk of mycotoxins in imported wines and beers consumed in Thailand. *World Mycotoxin Journal.* 10 (4): 401 -409
14. Mapongpeng, R., Laovechprasit, W., Poapolathep, A., Giorgi, M., Junchompoo, C., Sakulthaew, C., Jermnak U., Passadurak, W., Poapolathep, S. 2019. Pharmacokinetics of ceftriaxone in Green sea turtles (*Chelonia mydas*) following intravenous and intramuscular administration at two dose rates. *J Vet Pharmacol Ther.* 42(1):104-110.
15. Jermnak, U., Yurayart C. Poapolathep, A., Poapolathep, S., Imsilp, K., Tanhan, P., and Limsivilai, O. 2020. Evaluation of aflatoxin concentrations and occurrence of potentially toxigenic fungi in imported chia seeds consumed in Thailand. *J Food Prot.* 83(3):497-502.

16. Jermnak, U., Supsavhad, W., Kunakornsawat, S., Jaroensong T., Watcharasi, P., Visitnonthachai, D., Pairor, S., and Phaochoosak, N. 2021. Anticancer effects of *Gynura procumbens* leaves extract on two canine mammary cancer cell lines. *Vet. Med. Sci. in press*.

#### **National Publications :**

1. Poapolathep, S., Poapolathep, A., Imsilp, K., Limpoka, M., Phaochoosak, N., Klangkaew, N. and Jermnak, U. 2005. Comparative on bioavailabilities of different formulations of amoxicillin in dogs following oral administration. The 31st Veterinary Medicine and Livestock Development Annual, 2005, pp 100.
2. Poapolathep, A., Poapolathep, S., Imsilp, K., Noonpugdee, C., Tassanawat, T., Jermnak, U., and Phaochoosak, N. Natural occurrence of T-2 toxin, zearalenone and aflatoxins contamination in corn. 2005. The 31st Veterinary Medicine and Livestock Development Annual Conference on 2-4 November 2005: Bangkok, Thailand.
3. Jermnak, U., Poapolathep, S., Phaochoosak, N., and Klangkaew, N. Fate and Dispositions of Sulfamonomethoxine, Sulfamethoxydiazine and Sulfadoxine in Dogs. 2007. The Proceeding of 45th Kasetsart University Annual Conference on 30 January-2 February 2007.
4. Charoensan, A., Imsilp, K., Jermnak, U., Poapolathep, A., Poapolathep, S., Kusujarit, N., Klangkaew, N., and Onwarang, N. 2008. Pharmacokinetics of Enrofloxacin in Nile tilapia (*Oreochromis niloticus*). The Proceeding of 46th Kasetsart University Annual Conference on 29 January-1 February 2008.
5. Jermnak, U., Imsilp, K., Charoensan, A., Poapolathep, A., Poapolathep, S., Kusujarit, N., Klangkaew, N., and Passadurak, W. 2008. Comparative on bioequivalence of Amoxicillin in Broiler following oral administration. The Proceeding of 46th Kasetsart University Annual Conference on 29 January-1 February 2008.
6. Jermnak, U., Imsilp, K., Saengtienchai, A., Poapolathep, A., Poapolathep, S., Phaochoosak, N., Klangkaew, N., Wannapat, N., and Sukasem, T. 2014. Pharmacokinetics and tissue residues of enrofloxacin in Nile tilapia (*Oreochromis niloticus*). *Journal of the Thai Veterinary Medical Association under the Royal Patronage*. 65: 64-75.

#### **Patent :**

1. Nagasawa, Hiromichi, Sakuda Shohei, Jermnak Usuma and Kawai Ryo. "Aflatoxin production inhibitor and method for producing same, aflatoxin contamination control method, and bacterium capable of producing aflatoxin production inhibitor." WIPO Patent Application WO/2013/129291

#### **Conference presentations and Invited speakers:**

1. Jermnak, U., Sakuda, S., Kawai, R., Nagasawa, H. 2010. Studies on aflatoxin production inhibitors from essential oil and microbial metabolites. International Mycotoxin Conference Mycored 2010, Penang, Malaysia on December 1-4, 2010.
2. Invited speaker, "Feline drug metabolism and disposition: consideration of species differences" The 8th VPAT Regional Veterinary Congress (VRVC) 2014. IMPACT Arena, Exhibition and Convention Center, Bangkok, Thailand

## Poster Presentations:

1. Poapolathep, A., Poapolathep, S., Jermnak, U., Chareonsan, A. and Sukasem, T. 2008. Absorption and dispositions of enrofloxacin in hemolymph of giant freshwater prawns (*Macrobrachium rosenbergii*). Proceeding of the 15th Congress of the Federation of Asian Veterinary Associations, Bangkok, Thailand.
  2. Jermnak, U., Sugiyama, Y., Yoshinari, T., Nagasawa, H., and Sakuda, S. Studies on aflatoxin production inhibitors from essential oil and microbial metabolites. 2011. XIII International Congress of Bacteriology and Applied Microbiology, Sapporo, Japan.
  3. Pienpinijtham, P., Imsilp, K., Poapolathep, S., Poapolathep, A., Tanhan, P., Jermnak, U., Klangkhew, N., Khantee, N., Sonna, S., Makhanon, M. 2015. Evaluation of the bioavailability of ivermectin as feed medication in pigs. The 7th Asian Pig Veterinary Society Congress. Sofitel Philippine Plaza, Manila, Philippines.
  4. Imsilp, K., Tanhan, P., Jermnak, U., Saengtienchai, A., Klangkaew, N., Phaochoosak, N., Poapolathep, A., Poapolathep, S., Akrimajirachoote, N., Kunakornsawat, S., Pattanatanang, K., Ardsongnearn, C., Kittijaruwattana, S., Boonbanlu, O., Noentong, N., Lumyai, M. 2014. Bioequivalence of enrofloxacin formulations in pigs. The 18th Congress of the Federation of Asian Veterinary Association” at Marina Bay Sands, Singapore.
  5. Jermnak, U., Poapolathep, A., Poapolathep, S., Imsilp, K., Tanhan, P. 2016. Detection of aflatoxin B1 contamination in imported chia seed dietary supplements in Thailand. The 9th World Mycotoxin Forum and XIVth International Symposium on Mycotoxins, Winnipeg, Canada.
  6. Poapolathep, S., Klangkaew, N., Phaochoocak, N., Tanhan, P., Jermnak, U., Imsilp, K., Jangphonak, N., and Poapolathep, A. 2019. Occurrence and health risk of aflatoxin M1 in milk consumed in Thailand. Kasetart University Veterinary International Conference, Prachuap khiri khan, Thailand
  7. Makhanon, M., Malingam, N., Poomngam, W., Rodpaitoo, M., Khusakul, R., Poapolathep, A., Poapolathep, S., Tanhan, P., Jermnak, U., Klangkaew, N., Phaochoocak, N., and Imsilp, K. 2019. Asian Pig Veterinary Society Congress, Soul, South Korea.
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