

## **Assistant Professor Dr. Tatsaporn Todhanakasem**

Awarded St. Thomas Aquinas Award for Research (Third Class)

### **Citation**

Assistant Professor Dr. Tatsaporn Todhanakasem received Bachelor's degree in Biotechnology (Agro-Industry) from Assumption University, Master degree of Science in Biotechnology from The University of New South Wales (UNSW), and Ph.D in Food Biotechnology from Assumption University joint degree with University of California, Davis.

She join Assumption University in 2001 and she is currently a Deputy Chairperson of Agro- Industry.

Assistant Professor Dr. Tatsaporn Todhanakasem's professional and research interests in Bioenergy, application of bioprocess in the production of value-added products from agricultural wastes, biofilm application, recombinant DNA technology and food safety. Her research have been continuously published in international recognized journal in SCI list.

Assistant Professor Dr. Tatsaporn Todhanakasem has always realized that pursuing professional development is an illumination of the inner work of teaching and advance research. In this regard, she has carried out numerous researches, improve practice and enhance her understanding. She has been receiving many government grants to support her researches including Thailand Research Fund (TRF), National Science and Technology Development Agency (NSTDA), Thailand Research Fund for RRI (TRF-RRI) to support her researches and student educations. She has been recognized as a medium level researcher from the research outsources. In the meantime, she has integrated knowledge from her research to the classrooms and academic services.

The highlights of Assistant Professor Dr. Tatsaporn's research publication as follows:

- Todhanakasem, T., Rashmi, T. and Thanonkeo, P. "Development of Corn Silk as a Biocarrier for *Zymomonas mobilis* Biofilm in Ethanol Production from Rice Straw". Journal of General and Applied Microbiology 62 (2) (2016) (Impact factor 0.94)
- Todhanakasem, T., Narkmit T., Areerat, K. and Thanonkeo, P. (2015) "Fermentation of rice bran hydrolysate to ethanol using *Zymomonas mobilis* biofilm immobilization on DEAE cellulose". Electronic Journal of Biotechnology 18 (2015): 196-201. (Impact factor 1.403)

- Todhanakasem, T., Sangsutthiseree, A., Areerat, K., Young, G.M. and Thanonkeo, P. (2014). Biofilm production by *Zymomonas mobilis* enhances ethanol production and tolerance to toxic inhibitors from rice bran hydrolysate, *New Biotechnology*, Vol. 31, No. 5, pp. 451-459 (Impact factor 2.90)
- Todhanakasem. T., and G.M. Young (2008). Loss of flagellum -based motility by *Listeria monocytogenes* results in formation of hyperbiofilms. *Journal of Bacteriology* 190:6030-4 (Impact factor 3.64)
- Todhanakasem T, Puanglamyai N. (2012). Use of rice Hull Hydrolyzate in the Cultivation of *Lactobacillus acidophilus*. *KKU Research Journal* 17(5):778-786
- Todhanakasem T., Tammakrisada M. (2012). Isolation of Salmonella from Natural sources representing high potential for biofilm formations. *AU Journal of Technology* 15(4) 225-232
- Todhanakasem. T., D. Phositlimpakul and R. Jongsupangkarat (2009). Reduced Formation and Elimination of *Salmonella typhimurium* Biofilm Using Crude Garlic Extract. *KKU research journal* 15 (5): 331- 342.
- Todhanakasem T., Ninnetr S. (2013). Effects of levulinic acid and acetic acid over the growth and ethanol production by *Zymomonas mobilis*. *Proceeding in Thai Society for Biotechnology 2013 Conference*, The Emerald Hotel, Bangkok, Thailand P. 639- 645
- Todhanakasem T., Yongperakul A. (2014). Screening of Lactic acid bacteria produce antimicrobial compounds from chicken, fish and piglet intestine *Proceeding in International Conference on Sustainable Global Agriculture and Food Security (ICSAF 2014)*, The Emerald Hotel, Bangkok, Thailand P. 178- 185
- Todhanakasem, T. and Tiwari, R. “*Zymomonas mobilis* Biofilm Formations on Different Types of Carriers.” *Proceedings of the 6th International Conference on Fermentation Technology for Value Added Agricultural Products*, KhonKaen, Thailand, July 29-31, 2015.

The highlights of Assistant Professor Dr. Tatsaporn’s research funding as follows:

- Advisor (Co-researcher) on a senior project of an undergraduate student (year 2009) The isolation and partial characterization of gene encoding xylanolytic enzyme from metagenomic library of termite Gut (under YSTP research grant year 2009)
- Advisor (Co-researcher) on a senior project of an undergraduate student (year 2010) The research is on the isolation of gene encoded xylanase from baggase compost soil using sequence based approach (under YSTP research grant year 2010)
- Project investigator under the topic of “Enhance in ethanol production efficiency from rice straw and rice hull by *Zymomonas mobilis* biofilm’ (under Thailand Research Fund (TRF) year 2011- 2013)

- Project investigator under the topic of “Evaluate on the cellulase production by *Zymomonas mobilis*” (under Assumption University Research Fund year 2015-2016)
- Project investigator under the topic of “Enhance bioethanol production and toleration on toxic inhibitors from lignocellulosic hydrolysate by *Zymomonas mobilis* biofilm and study on the ethanol production from rice straw by the biofilm reactor” (Under National Science and Technology Development Agency, year 2016- 2018)
- Project investigator under the topic of “Identification and Overexpression of endoglucanase and xylanase in *Zymomonas mobilis*” (under Assumption University Research Fund year 2015-2016)
- Research grant from RRI of Thailand Research Fund and Khon Kaen Sugar Industry Public Company Limited to support Ms. Apinya Sowatad for her Master degree study. The grant will be approved in academic year 2/2016 toward academic year 2/2018.

For all of her commitment and dedication to the research and academic production, Assumption University is pleased to confer the St.Thomas Aquinas Award for Research (Third Class) on Assistant Professor Dr. Tatsaporn Todhanakasem on this auspicious date on December 24, 2016.

