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Recognised for award-winning scientific research

SCIENTIFIC research for industrial application is at the core of Tunku Abdul Rahman University College's (TAR UC) applied science programmes. Therefore, applied science students are encouraged to conduct research projects that will have potential for practical use in the industries.

Take for example, the recent research projects by the Faculty of Applied Sciences (FOAS) students which were sent for the Final Year Project & Postgraduate Poster Competition (FYPPPC) organised by MNNF Network on June 30 last year on virtual platform.

Out of the seven undergraduate students who took part in the Poster Presentation based on their final year project findings, two were selected for gold awards and the others won silver awards among the 41 posters presented by various universities.

It was an international event open for students from both private and public universities from Malaysia, Indonesia, Thailand, Poland, Jordan and India.

Eng Yi Lin, a Bachelor of Science (Hons) in Food Science student and a gold award winner, explains that her research project was on the effects of cinnamon bark and cinnamon twig aqueous extracts on the chemical, physicochemical and bioactive properties of cheese.

"The main focus of this topic is on the limitation of the treatment of Type 2 diabetes mellitus. Most diabetic cases rely on the insulin injection and hypoglycemic drugs to maintain their glucose homeostasis. Thus, this study was conducted to determine the chemical and bioactivity changes of cheese with the incorporation of cinnamon bark and twig aqueous extract and the effects of Lactobacillus plantarum TAR4 on the physical, chemical and bioactive properties of cinnamon-fortified cheese. This project provides insight on the use of cinnamon bark and cinnamon twig extract to improve post-digestion antioxidant, anti-inflammatory and anti-diabetic properties of cheese," she says.

Bachelor of Science (Hons) in Bioscience with Chemistry student Hew Shu Ying won the gold award in the FYPPPC competition.

"The research I had done can be used in the industry that manufactures functional dairy products such as Kraft and Chesdale. My research provided supportive information on the functional benefits of the addition of cinnamon bark and cinnamon twig extracts in cheese. Fortification of functional ingredients in functional food is the current trend now," she added.

Eng Yi Lin, a Bachelor of Science (Hons) in Food Science student, won the gold award in the FYPPPC competition.

Another gold award winner, Hew Shu Ying, who is a Bachelor of Science (Hons) in Bioscience with Chemistry student, conducted a research project on finding a potential host-originated probiotic to be used as feed additive for the local red tilapia in freshwater aquaculture by isolating lactic acid bacteria from its gastrointestinal tract.

"There are lots of commercial probiotic products available but they did not achieve expected growth efficacy since the strains are not locally isolated and targeted specifically for local red tilapia.

"With a potential host-originated probiotic, it is expected to exert beneficial effects in targeted livestock more efficiently and in a more environmentally friendly method as compared to the use of antibiotics or chemicals, indirectly helping fish farmers in achieving economic sustainability through improvement in growth efficacy and food conversion ratio.

"The outcome of the project is that a potential strain is successfully isolated, characterised and can be further explored to be used as feed additive or directly administered to improve water quality in red tilapia freshwater aquaculture," she adds.

■ Find out more about TAR UC's Applied Science programmes by visiting TAR UC's Virtual Open Day happening every weekend until April 25, 10am-5pm. Alternatively, call FOAS at 011-1075 8544 or visit *www.tarc.edu.my/foas*

Prospective students are also encouraged to apply online at *www.tarc.edu.my*. Applicants who submit their applications online by April 30 will receive a RM60 waiver of processing fee. Attractive scholarships are also available at TAR UC on the basis of academic merit and sibling discount for qualified students.