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For a better future

TAR UC students win Gold Awards for industry-applicable scientific research

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

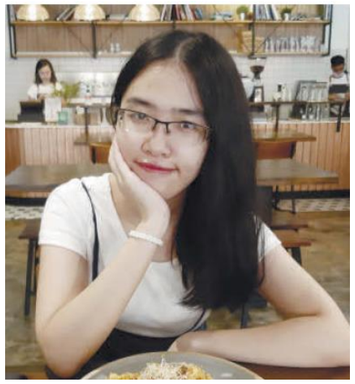
An example of such would be the research projects by Faculty of Applied Sciences (FOAS) students, that were sent for the Final Year Project and Postgraduate Poster Competition organised on a virtual platform by MNNF Network on June 30 last year. It was an international event open to students from both private and public universities from Malaysia, Indonesia, Thailand, Poland, Jordan and India.

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 other five won Silver awards among the 41 posters presented by various universities.

The competition aimed to provide a platform for students to present and share their final year projects and hone their presentation skills. The criteria of the competition were based on poster appearance and organisation, content, video presentation and if applicable, commercialisation potential.

One of the Gold Award winners, Eng Yi Lin, a Bachelor of Science (Hons) in Food Science student, explained that her research project was on the effects of cinnamon bark and cinnamon twig aqueous extract 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 people rely on insulin injections and hypoglycemic drugs to maintain their glucose homeostasis. The 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. The 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 said.



(above) The project by Hew on a host-originated probiotic to improve growth efficacy of red tilapia fish also won a Gold Award.

Gold Award winner Eng's project involved the anti-diabetic properties c. cinnamon-fortified cheese.

"The research I did can be used in the industry that manufactures functional dairy products such as Kraft and Chesdale. My research provides supportive information on the functional benefits of the addition of cinnamon bark and cinnamon twig extract in cheese. Fortification of functional ingredients in functional food is the current trend now."

The second 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 fish in freshwater aquaculture, by isolating lactic acid bacteria from its gastrointestinal tract.

"There are lots of commercial probiotic products available but they do not achieve the 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," she said.

"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."

__For__ more information about TAR UC Applied Science programmes, visit www.tarc.edu.my/foas or contact FOAS at 011 – 1075 8544. Prospective students are also encouraged to apply online at www.tarc.edu.my. Applicants who submit their applications online by April 30, will have the RM60 processing fee waived. Attractive scholarships are also available at TAR UC on the basis of academic merit and sibling discount for qualified students.