Research

Functional dairy food seen as potential remedy to cancer and diabetes

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A team of researchers from the Faculty of Industrial Science & Technology (FSTI) at Universiti Malaysia Pahang (UMP) – comprising lecturers and undergraduates – has embarked on a study of possible remedy for cancer and diabetes via the development of functional dairy food.

Headed by FSTI lecturer, Dr Jaya Vejayan Palliah, the research has successfully identified selected herbal plants within the country that are found capable of dual functions – to convert fresh milk that has gone through its coagulation processes into curd, as well as enhance the latter's efficacy to create further biological activities.

"As we are well aware, societies in developed nations are increasingly concerned about healthy diet, to the extent that they have begun to emphasize on functional food," said Dr Jaya.

"Our very own research into such functional food was originally mooted in 2016, with the initial intent to study how the snake venom of a Malayan Pit Viper can be used as a milk coagulant," he emphasized.

At the initial stage of the research, he said, the group of researchers was able to isolate and extract the enzyme with coagulant characteristic from the snake's venom.

However, due to safety concerns, they eventually turned to herbal plants to expand their research findings on how to manufacture the coagulated milk-based food products.

"It was certainly a challenge for us to identify and locate herbal plants that can act as such coagulant. After much effort, we discovered four types of possible herbs," he highlighted.

According to Dr. Jaya, these selected herbs, recognized as super-coagulants, were subsequently formulated to ensure that their hydrolysis enzymes and compounded constituents are hyper-active.

"These hydrolysis enzymes can act as the milk protein-cutter, and convert the liquid form into a solid one, while simultaneously adding efficacies like anti-oxidant, anti-diabetes and anti-microbes."

Malaysia's tropical rainforest, with its biodiversity of plants and herbs, is seen by many to hold sources of potential remedies to various modern-day diseases.

It is also a cradle of functional food sources, attracting the interest of the global population as they continue to move towards healthy lifestyle and diet.

Dr. Jaya, who coveted the gold and special medals at UMP's CITREX 2019 (Staff Category), said the team will continue to conduct series of para-clinical testing to fortify the capability of the super-

coagulants, in order to substantiate the university’s application for patent and copyright, for its future pursuit of commercialization.

He’s hopeful that the university’s research will get its due attention from external agencies, which could lead to future collaborations – for both parties to reap mutual benefits in business diversification from the production of long-lasting and quality curd.

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