

NUS creates beer with probiotic twist

It contains a probiotic strain that can neutralise toxins and viruses

Felicia Choo

Indulging in an after-work drink could soon bring some health benefits.

Researchers from the National University of Singapore (NUS) have created a new sour beer which contains a probiotic strain that can neutralise toxins and viruses, as well as regulate the immune system. It is the brainchild of Ms Alcine Chan, 22, a fourth-year student from the university's faculty of science.

A frequent consumer of probiotic drinks, she came up with the idea after noticing that most of them were dairy products, which people who are lactose-intolerant or allergic to proteins may avoid.

"While good bacteria are often present in food that has been fermented, there are currently no beers in the market that contain probiotics," said Ms Chan.

"Developing sufficient counts of live probiotics in beer is a challenging feat as beers contain hop acids that prevent the growth and survival of probiotics."

Every 100ml of the new beer contains one billion probiotics – the intake of probiotics per serving recommended by the International Scientific Association for Probiotics and Prebiotics. It is also unfiltered and unpasteurised, which allows the drink to retain live probiotic counts.

The final product has an alcohol content of about 3.5 per cent and has a slightly fruity taste.

The beer, which Ms Chan took nine months to perfect, is her final-year project and was produced with the help of Associate Professor Liu Shao Quan from NUS' Food Science and Technology Programme.

One of the challenges was finding a probiotic strain resistant to components in the beer that prevent the growth and survival of probiotics. These components include acid, alcohol and hop compounds which kill bacteria and add the floral, spicy aroma.

Ms Chan had experimented with five other probiotic strains, and managed to succeed with the *Lactobacillus paracasei* strain after varying factors such as temperature and the amount of ingredients during the brewing process.

The beer takes about a month to brew, and Ms Chan and Prof Liu have filed a patent for it. Prof Liu said that a Japanese company has expressed interest.

However, this beer is still no substitute for health drinks, according to dietitians.

"I think it's an interesting choice that they would pair probiotics with beer," said Ms Jaclyn Reutens, a dietitian from Aptima Nutrition and Sports Consultants.

"But alcohol is something that is definitely not a daily requirement, so I wouldn't recommend that you drink this beer more than beer without probiotics."

Ms Reutens added that the recommendation for alcoholic drinks in general is one to two standard alcoholic drinks a day for women, and two to three drinks a day for men, with two alcohol-free days in-between.



The probiotic beer is the brainchild of Ms Alcine Chan, 22, a fourth-year student at the National University of Singapore's faculty of science. She is seen here with the sour beer containing probiotics that she brewed for her final-year project. PHOTO: LIANHE ZAOBAO

TOUGH FEAT

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