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Mackay pilot plant set to fast-track Australiaâ??s novel food ingredients production

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A $3.9 million project will complete the transformation of the QUT Mackay Renewable Biocommodities Pilot Plant (MRBPP) into a state-of-the-art food-grade compliant facility which will enhance Australiaâ??s ability to produce novel food ingredients.

Professor Ian Oâ??Hara, who led the development of the Mackay Renewable Biocommodities Pilot Plant (MRBPP) more than a decade ago, said the co-investment between QUT and Australiaâ??s Food and Beverage Accelerator (FaBA) would significantly expand the facilityâ??s capability and allow companies to fast-track product development in the food and beverage sector.

â??This project is part of an overall $16 million upgrade to the facility to be completed this year which will transform the pilot plant into Australiaâ??s leading physical containment level 2 (PC2) large-scale food-grade research translation facility,â• Professor Oâ??Hara said.

â??This will enable the production of novel food and beverage ingredients via precision fermentation and boost product development by providing a unique capability to undertake early-stage scale-up, reducing cost and timeframes for getting new products to market.

â??Precision fermentation allows us to manufacture new high-value food ingredients like proteins that can boost our bioeconomy in Australia and provide new domestic and export opportunities for our agricultural and food and beverage industries.â•

The QUT research team involved in the project includes Professor Oâ??Hara, Professor Jolieke van der Pols, Associate Professor Mark Harrison and Dr Jo Blinco.

Precision fermentation is a technology that allows us to convert sugars into a range of other food ingredients and products in brewery-style fermentation tanks.

Unlike traditional fermentation, which is used to make products such as beer and yoghurt, precision fermentation tunes the microorganisms to produce specific enzymes, fats or proteins and allows us to do this at a large scale.

â??Australia has many of the ingredients for a successful precision fermentation ecosystem,â?? Professor Oâ??Hara said.