



Media Release

16 December 2005
Ref 05/XXX

Growing more good oil from the sea

Oil-rich marine microalgae are being assessed for their commercial potential under a new agreement between Clover Corporation Ltd, the CSIRO Food Futures Flagship and the CRC for Bioproducts.

"Microalgae are the natural omega-3 factories of the sea," flagship director Dr Bruce Lee says.

"They can thrive in dark, organic-rich environments where they convert carbohydrates to beneficial oils that are passed up to fish through the marine food chain.

"They may offer a renewable source of omega-3 oils for use in human and animal diets, depending on how well they adapt to life in large-scale culture facilities."

The microalgae strains have been recently isolated by CSIRO and are to be evaluated by Clover Corporation. The strains are efficient producers of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) under laboratory conditions.

These omega-3 oils are important in infant nutrition, and beneficial against a range of human disorders including coronary heart disease, rheumatoid arthritis and hypertension.

Clover Corporation is an established producer of nutraceuticals based on fish oils and is a leader in the microencapsulation of oils for use in 'functional' food products such as breads and dairy products.

"We'll be evaluating the scale-up potential of microalgae in large-scale culture vessels," Clover director, Guy Drummond, says. "The market opportunity will be evaluated and a selected strain used to prepare samples at pilot-plant scale.

"The challenge is to scale up the volume while maintaining their production efficiency and beneficial oil profile. This entails moving from laboratory-scale cultures of 100 millilitres to pilot-scale cultures of 10,000 litres."

The oil profiles of the higher-volume microalgae cultures will be characterised at CSIRO Marine and Atmospheric Research's laboratories in Hobart.

Two applications of the microalgae are of interest: in the shorter term, as animal or aquaculture feed, and in the longer term, as a refined source of DHA oil for human consumption.

The Federal Government through the National Food Innovation Strategy has provided a Food Innovation Grant to Clover Corporation of approximately \$1 million to fund the project.

Further information

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