

LABocol: Cholesterol Lowering Probiotic Yoghurt

Teagasc and UCC researchers have developed an invention which allows a novel Lactic acid bacterial (LAB) strain, *Lactobacillus mucosae*, to be used in a nutritional approach to lowering cholesterol, e.g. in a probiotic yoghurt. Teagasc and UCC seek a commercial partner in the functional food space to further develop this technology with a view to commercialisation and further validation of the supporting health claims.

Summary

Globally, a third of ischemic heart disease is attributable to high cholesterol, with raised cholesterol estimated to cause 2.6 million deaths annually.

Teagasc and UCC researchers have produced scientific data showing that a novel probiotic yoghurt containing novel exopolysaccharide (EPS) producing *Lactobacillus mucosae* DPC6426 can lower blood cholesterol, a risk factor in the development of coronary heart disease, by 53% in 12 weeks.

Problem Addressed

The invention broadly relates to a LAB strain that has been found to express an EPS and confers cardio-protective properties when consumed. It provides for the use of DPC 6426 as a possible nutritional approach to lowering cholesterol.

LAB strains are widely added as starter cultures in the dairy industry and have a long history of safe use. The presence of EPS in dairy products improves texture, decreases the risk of syneresis (whey separation) and improves the techno-functional properties of the products. It has been suggested that EPS produced by LAB interacts with cholesterol in a manner like dietary fibre.

Significantly increased cholesterol excretion was found for the probiotic yoghurt fed group.

Competitive Advantage of Technology

1. LAB are generally regarded as safe (GRAS) according to the FDA.
2. In-situ production of EPS throughout storage resulted in higher quality yoghurt with improved textural and rheological qualities compared to other yoghurts.
3. Blood cholesterol reduced by 53% in 12 weeks.

Opportunity

There is an opportunity to partner with Teagasc/UCC in developing and commercialising a cholesterol lowering probiotic yoghurt, including:

- Establishing the efficacy of the cholesterol lowering properties and effects on plaque stability of the probiotic in animal studies.
- Determining the mechanism of action and benchmarking against plant sterol esters and oat beta-glucan.
- Conducting a human intervention trial to compile a dossier to support a health claim application.

Intellectual Property Status

A patent application was filed by Teagasc and UCC in 2012.

Partners



Funding



How to Proceed:

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