Probiotics against heart disease

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*Welsh scientists identify cholesterol-lowering friendly bacteria*

‘Friendly bacteria’ can play a role in helping to prevent high blood cholesterol levels, and support current treatment programmes for heart disease. This is the finding of a collaborative study between the University and probiotic manufacturer, Cultech Ltd.

Heart disease kills approximately one person every 34 seconds and is responsible for more deaths worldwide than any other disease. It is a major economic burden costing the UK economy about £19 billion per year.

High cholesterol level is one of the major risk factors for heart disease. Statins are currently widely used to manage this problem, but these sometimes have limited effectiveness and can be associated with numerous adverse side effects. This has encouraged the scientific community to search for alternative approaches, with probiotics emerging as a potential solution.

This particular study, published in *Beneficial Microbes*, used cell-based experimental models to identify a strain of ‘friendly bacteria’ that ultimately may be able to help lower blood cholesterol levels. Researchers found that the presence of *Lactobacillus plantarum* CUL66 can alter the behaviour of the major cholesterol absorbing cells of the intestines (enterocytes) and reduce their ability to transport cholesterol.

“This represents an exciting preliminary finding, and further studies in animals and humans are already in the pipeline,” said Dr Dipak Ramji from the School of Biosciences, a co-author of the study.

“Our work presents real hope in the fight against heart disease, opening up new avenues for further research on the use of probiotics in the management of high blood cholesterol levels, a major risk factor for the development of atherosclerosis - a disease in which cholesterol-rich plaques build up inside the arteries.”

Dr Daryn Michael, Senior Research Scientist at Cultech Limited, added: “This is an interesting piece of research that has potential implications for the way we address the treatment of high blood cholesterol, and we look forward to carrying out further studies in this area.

“The collaborative relationship between Cardiff University and Cultech has facilitated valuable research and has resulted in a two-way transfer of knowledge that will continue into the future.”