

Japan reports mechanisms of bacteria-derived fibres in supporting gut health, preventing obesity

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In a study recently published in the journal *Gut Microbes*, researchers from Kyoto University, Tokyo University of Agriculture and Technology, and Noster Inc. in Japan, report the mechanisms of bacteria-derived fibres in supporting gut health and metabolism and preventing obesity.

Probiotic foods such as miso and kimchi are rich in bacteria that keep the gut and body healthy. A complementary food group known as prebiotics (mainly fibrous foods) serve as fuel for these bacteria to thrive. However, the exact mechanisms which make prebiotics favorable for our health is unclear.

Lactic acid bacteria, such as *Leuconostoc mesenteroides* (*L. mesenteroides*), are used in the fermentation process of fermented foods such as kimchi, sauerkraut, and pickles. One of the fibrous metabolites of *L. mesenteroides* is exopolysaccharide (LmEPS). The researchers thus focused their study on the potential role of LmEPS as a prebiotic fiber. EPS, which was produced in large quantities by *L. mesenteroides* was first isolated and its chemical structure was analysed.

"Our findings reveal an important mechanism that accounts for the effects of diet, prebiotics, and probiotics on energy homeostasis," said the researchers. What's more, LmEPS can be explored further as a preventative strategy against lifestyle-related diseases such as diabetes or obesity.

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