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Fermented foods as sources of psychobiotics: Implications for gut-brain axis regulation and mental health

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Abstract

The potential of the new field of psychobiotics, live microorganisms that, when consumed in sufficient quantities, have positive effects on mental health, to alter the gut-brain axis and enhance psychological well-being has drawn more and more attention. This review summarises the most recent research on the function of fermented foods as a source of psychobiotics, emphasising their modes of action and prospective applications as treatments for anxiety, depression, and stress-related illnesses. Short-chain fatty acids (SCFAs), which are produced by fermented foods that are high in good bacteria like *Lactobacillus* and *Bifidobacterium*, are essential for preserving the integrity of the gut barrier, lowering inflammation, and controlling neurotransmitter signalling. According to preclinical and clinical research, psychobiotics boost microbial diversity, encourage the expression of neurotrophic factors, and affect the hypothalamic-pituitary-adrenal axis, all of which are linked to mood management and cognitive performance. Though more research is required to maximise their usage and elucidate underlying mechanisms, fermented foods generally constitute a promising, natural supplement to traditional therapy for mental health issues.

1. Introduction

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