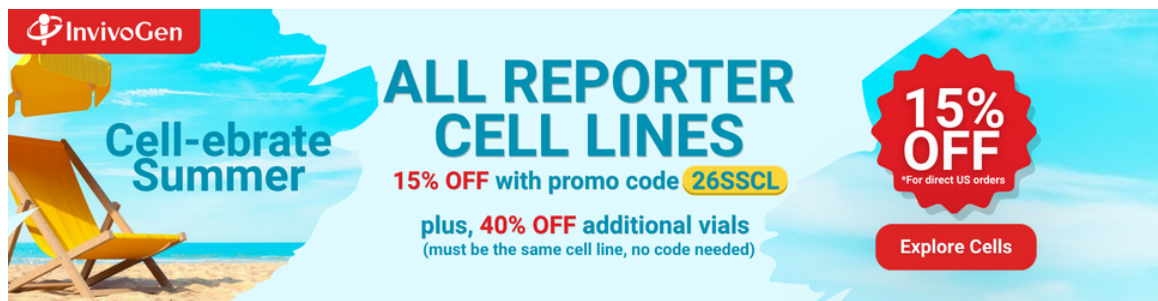


The Fungal Connection: Gut Mycobiome and Multiple Sclerosis

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microbial, immunological, bioinformatics and molecular biology state-of-the-art techniques.

Results Our results show distinct fungal community profiles in patients with MS compared to healthy controls and the manipulation of the mycobiota in experimental autoimmune encephalomyelitis (EAE), a mouse model mimicking many aspects of MS, indicated an important role on gut microbiome, immune cells and disease activity.

Conclusion Based on these findings, we hypothesize that gut fungi play an important role on microbiome-immune interactions and thereby could impact the pathogenesis of MS. Thus, the further exploration of our research may have the potential to lead to the discovery of unique biomarkers and to the future development of novel treatment or prevention strategies for MS.

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The Fungal Connection: Gut Mycobiome and Multiple Sclerosis
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Abstract

Introduction Multiple sclerosis (MS) is an autoimmune demyelinating disease of the central nervous system with unclear etiology, influenced by genetic and environmental factors. Recent studies have highlighted a potential role of the gut microbiome in MS, with a specific focus on the bacterial components. However, the impact of the gut mycobiota- the fungal community, on immune function and disease remains underexplored.

Methods We investigated human samples and different experimental murine model systems by using various