gutflix
GI learning, personalised

Summary

THE PROBIOTIC SACCHAROMYCES BOULARDII CNCM I-745 PRESERVES AND RESTORES THE FUNCTIONALITY OF THE INTESTINAL BRUSH BORDER UPON INFLAMMATION

Isabelle Gross

UEG Week Copenhagen 2023 | Poster

IBD

October 15, 2023

The probiotic yeast Saccharomyces boulardii CNCM I-745 protects and restores intestinal epithelial barrier function under inflammatory conditions by preserving the intermicrovillar adhesion complex and brush border structure in cell and organoid models.

KEY POINTS

- Sb treatment prevented cytokine-induced drops in transepithelial electrical resistance and maintained E-cadherin localization at cell membranes in both preventive and curative models using Caco-2/TC7 cells and organoid-derived monolayers.
- Sb preserved brush border structure by preventing destruction of microvilli clusters, maintaining CDHR5 presence at microvilli tips, and favoring microvillar clustering to restore a mature functional brush border.
- Sb strengthened intestinal barrier function in human intestinal organoid-derived monolayers in a dose-dependent manner, correlating with CDHR5 presence.
- Dysfunction of the intermicrovillar adhesion complex, particularly loss of CDHR5, is associated with disease severity and treatment response in inflammatory bowel disease.
- The findings suggest Sb may offer benefit in diseases with persistent intestinal lesions such as IBD, and that understanding brush border assembly through IMAC may reveal new therapeutic opportunities.

VIEW THIS CONTENT ON GUTFLIX

https://gutflix.eu/search/d/4a865490-743b-11ee-8ae0-0242ac140004

AI-generated summary

This summary was generated by an AI large language model based on the content transcript. It is for informational purposes only and should not be considered a substitute for clinical judgment. Always rely on your professional expertise and the full clinical context when making clinical decisions.