5th European Food Science Congress
October 26-27, 2022 | Webinar
Volume: 12

Immunomodulation and Intestinal Morpho-Functional Aspects of a Novel Gram-negative Bacterium Rouxiella badensis subsp. acadiensis (Canan SV-53)

Nour Yahfoufi

Department of Cellular and Molecular Medicine, Faculty of Medicine, University of Ottawa, Ontario, Canada

A novel bacterium, Rouxiella badensis subsp. acadiensis (Canan SV-53), isolated from the microbiota of wild blueberry fruit was investigated for its immunomodulation capabilities and intestinal morpho-functional aspects. Although the bacterium was used for blueberryfermentation and enhancing its anti-inflammatory effects on neurodegeneration, diabetes, and cancer, no study has assessed the effect of the bacterium on health. In this study, we used several in vitro and in vivo assays to evaluate the interaction of novel potential probiotic with the intestinal mucosa and its impact on the localized immune response. The strain antibiotic susceptibility has been investigated as well as its tolerance to gastric and intestinal environment and ability to attach to human intestinal epithelial cells (Caco-2 and HT-29). In addition, Balb/c mice were used to explore the immune-modulatory characteristics of the live bacterium at the intestinal level and its impact on the morpho-functional aspects of the intestinal mucosa. In vitro assays revealed the ability of the bacterium to survive the gastric and intestinal simulated conditions and to satisfactorily adhere to the human intestinal epithelial cells.

Biography

Nour Yahfoufi is a PhD. Candidate at university of Ottawa, Canada. She holds a master's degree in microbiology and immunology from the United Arabs University and a Pharm.D degree from Saint-Joseph university Lebanon.

nyahf074@uottawa.ca