



Advantages and Limitations of utilizing Clostridium species as Probiotics-A Systematic Review

Kulvinder Kochar Kaur, Gautam Allahbadia, Mandeep Singh

Punjab University, India

Abstract:

Having reviewed the role of Gut microbiota (GM) earlier, in Gastrointestinal Tract (GIT) homeostasis through the multiple bacteria on the role of gut microbiota (GM) in obesity as well as metabolic disorder like type 2 diabetes mellitus (T2DM), non-alcoholic fatty liver disease (NAFLD), role of probiotics as well as prebiotics in preventing obesity, NAFLD, besides engineering probiotics for tackling lots of diseases besides in its role in neuropsychiatric disease (NPD) prevention along with maintaining intestinal homeostasis, here we have tried to go further and study the role of specific commensal bacteria like the Clostridia species (spp.). Clostridia spp., representing the major commensal bacilli in the intestines, influence plenty of salutary actions on this homeostasis of the intestine. These spp. have been documented to ameliorate inflammation as well as allergic diseases successfully in view of their specific biological actions. The cellular parts as well as metabolites they form like butyrate, secondary bile acids as well as indole propionic acids exert a probiotic action mainly via providing energy to the intestinal epithelial cells, by which they give strength to the intestinal barrier along with crosstalk with the immune system (reviewed by us in detail earlier). Hence in turn, the diet as well as state of the physiological body shape a specific pattern of Clostridia spp., in gut. In view of their biological actions Clostridia spp., have massive potential in the form of probiotics. Yet safety evaluation has not been conducted till now, hence some non-negligible chances of complication following their use. Hence here we have tried to review both advantages, in addition to difficulties in using them as probiotics to form Clostridia spp., as innovative probiotics for animal health as well as animal generation.

Keywords: Clostridia spp, Probiotics, Intestinal homeostasis, SCFA Bile acids, Allergic diseases

Biography:

Kulvinder Kochar Kaur is the Scientific Director of Dr. Kulvinder's Centre for Human Reproduction. In 1980, she topped in Medicine of all medical colleges and got Dr. Devi Chand Gold



Medal from the late PM Indira Gandhi. She has been working in the field of neuroendocrinology to unearth the complexities of obesity and she is trying to work on the neurophysiology of GnRH control, kisspeptins besides her endeavor to unearth the complexities of AIDS/Cancer. During this period she managed to successfully treat the first case of non-gestational chorio-carcinoma of uterine body in a young girl medically, thereby preserving her fertility.

Recent Publications:

1. Kulvinder Kaur. Gynecology and Pediatric Medicine An Update on the Diagnosis, Classification and Management of Congenital Cervical Abnormalities: A Systematic Review
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