

Reviewer 1:

As requested, we have discussed the following items: microbiota- expression of pattern recognition receptors- hypothalamus-pituitary-adrenal stress axis and breakdown of the mucosal barrier- modulation neuro-immune signalling, modulation of enteric neurons, visceral hypersensitivity and altered colonic motility (please see new pages 10-15).

As requested, we have added several data on fecal transplantation (please see new references from 294 to 304). The FMT has been discussed in more details (please see pages 29-30).

All the reference numbers have been checked .

The typos have been checked.

Reviewer 2:

English has been revised throughout the whole text

As requested, in the part MICROBIOTA AND IBS we have motivated the example of IBD with appropriate citations (page 9 and references from 70 to 74).

As requested, in the “Putative mechanisms of action of probiotics” section, subgroups “Gastrointestinal dysmotility, Epithelial barrier/Intestinal inflammation/Immune activation, Dysfunction of brain-gut axis and psychological distress”, we have specified the effects of the various species of probiotics (please see pages 20, 22, 24, 25 and the relative references).

As requested, in the “PREBIOTICS” we have discussed the possible role of FODMAP diet in relationship with the effects on the modifications of gut microbiota (please see pag. 27 and correlate reference).