

*Reviewer n 00003472*

1. Terminology in gut microbiota is difficult to understand for non-specialists. Enterobacteriaceae in gut microbiota is one of key families in patients with liver cirrhosis. Enterobacteriaceae family includes E. coli and Klebsiella, key bacteria for spontaneous bacterial peritonitis. However, many readers are required to consult a dictionary to understand forementioned relationship. These additional explanations help readers to understand easily. "Enterobacteriaceae family includes *Escherichia coli* and *Klebsiella spp.*, key bacteria for spontaneous bacterial peritonitis."
2. Although Table 1 and Table 2 include a lot of important information, some words are divided into two lines. Please modify these tables as readable one. Tables have been modified in landscape format to make them more readable. I think this is an issue to be corrected in the final paper proof.
3. Some abbreviations are not spelled out at the first appearance. Already corrected (see below)

*Reviewer n 03217946*

1. Title should be changed to include the effect on hepatic encephalopathy and spontaneous bacterial peritonitis. The title has been changed in "EFFECT OF RIFAXIMIN ON MICROBIOTA COMPOSITION IN ADVANCED LIVER DISEASE AND ITS COMPLICATIONS"
2. Abstract: The abbreviation SBP should be spelled out in line 7 where "spontaneous bacterial peritonitis" first occur. No abbreviation has been included in the abstract  
  
In core tip it is mentioned that rifaximin has beneficial effects on hemodynamics in cirrhotic patients, but this is not mentioned in the abstract. "Rifaximin has been demonstrated to exert beneficial effects on cognitive function in patients with hepatic encephalopathy, to prevent the development of spontaneous bacterial peritonitis, to reduce endotoxemia in cirrhotics and to improve hemodynamics."
3. Core tip line 4: HE is not explained. I guess it should be "at risk of hepatic encephalopathy" "Rifaximin is able to improve cognitive tests and practical abilities, to reduce the risk of hepatic encephalopathy recurrence and the number of hepatic encephalopathy-related hospitalizations."
4. Introduction line 2: Spell HE out. "Rifaximin is a non-systemic antibiotic approved for the treatment of traveler's diarrhea and overt hepatic encephalopathy (HE)"

*Reviewer n 03295139*

Please replace the words such as sickest individuals with other appropriate words such as most severe etc. "is characteristic of the individuals with a more severe disease, such as cirrhotic outpatients and inpatients"

They state in introduction that have demonstrated that rifaximin does not really change the overall composition of gut microbiota, but promotes the growth of bacteria beneficial

to the gut. There is slight contraction in first and second part of this sentence. It should be corrected to convey the substance in a simple way. "...rifaximin does not really change the overall composition of gut microbiota but that it is able to provide minimal changes, such as promoting the growth of bacteria beneficial to the gut"

*Reviewer n 03415937*

- 1) It will be worth to add some information on what normal GI microbiota looks like before discussing "THE "FINGERPRINT" OF GUT MICROBIOTA IN LIVER CIRRHOSIS". "The human gut hosts a bacterial core involved in maintaining gastrointestinal health and mainly composed of the phyla Bacteroides and Firmicutes, which include the genera Bacteroides, Clostridium clusters XIVa and IVa, Eubacterium, Faecalibacterium, Lactobacillus, and Roseburia. In patients affected by liver cirrhosis, at the phylum level, Bacteroidetes are decreased in favor of Fusobacteria and Proteobacteria, such as Enterobacteriaceae and Pasteurellaceae"
- 2) In the introduction: "Rifaximin is a non-systemic antibiotic approved for the treatment of traveler's diarrhea and overt HE". IBS-D should also be added to this list. "Rifaximin is a non-systemic antibiotic approved for the treatment of traveler's diarrhea, irritable bowel syndrome (IBS) with diarrhea and overt hepatic encephalopathy (HE)"
- 3) Please define abbreviations before using them, also include them in the figure and table legends if they have been used. *Already corrected (see above)*