

Review of: "Long-term beneficial effect of faecal microbiota transplantation on colonisation of multidrug-resistant bacteria and resistome abundance in patients with recurrent *Clostridioides difficile* infection"

Sophie Pecquet

Potential competing interests: No potential competing interests to declare.

Dear authors,

I have carefully reviewed the manuscript submitted by San Nooij et al. I think the topic is very interesting and that the FMT is not sufficiently considered as the therapeutic tool it could be, even further than recurrent *C. difficile* infections treatment. Studies are still needed to provide robust data on FMT effect, and in this context, your study is encouraging, bringing many data of interest. Also, combining antibiotherapy to FMT represents a relevant therapeutic advance.

Let me just add below few comments and questions:

- It should be clearly stated that this trial is an observational study.
- Primary outcome should be distinctly indicated as such. "To assess the presence of MDR bacteria" seems to be the one, linked to "the resistome" as indicated in the first sentence in Methods is confusing. And it should be clarified whether the primary outcome concerns short term or long term MDR bacteria presence.
- Sample size calculation should be added.
- A study flow chart would clearly help the reader.
- The screening of the donors is not described, just referenced. It is a choice however, the absence, presence, level of MDR in the donors' samples should be at least indicated. Was it an exclusion criterion for the donors? it could be stated
- Inclusion, exclusion criteria of patients could be mentioned.
- Sample sizes are lacking on some figures, so readers don't know how stats have been calculated. For instance, fig 1B shows results on 22 patients when 1A shows the results on 87... , even though samples sizes are indicated in the legends, graphs are bit puzzling
- Knowing antibiotic treatment has an impact on gut microbiota, why pre-FMT samples were collected pre or post antibiotic therapy and not at same time?
- During the long time follow up period, do you know if some of the patients had some episodes of *C. difficile* and/or MDR infections?

Best regards

Sophie Pecquet

