Reviewer’s report

Title: E. coli diversity: low in colorectal cancer

Version: 0 Date: 11 Sep 2019

Reviewer: Ana Lucia Fachin

Reviewer's report:

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Title: E. coli diversity associated with age and health status of the host: low in colorectal cancer

The title should be revised to clarify the major idea

My suggestion: E. coli diversity is low in colorectal compared to healthy host

Abstract:

Background: Escherichia coli are mostly commensals but also contain pathogenic lineages. It is largely unclear whether the commensal E. coli as the potential origins of pathogenic lineages may consist of monophyletic or polyphyletic populations.

In the background: Please insert the aims of manuscript. The background is confused and not showed the relation among diversity and pathogenicity or colorectal cancer.

gel electrophoresis (PFGE) techniques was not cited in the abstract.

Results:

Why did you use the pulsed field gel electrophoresis (PFGE) techniques to observed genomic differences among the E. coli strains? Because you have a DNAseq data is more reliable.

Please give more details about:

Probing the pan-genomes

140 The pan-genomes and core-genomes analysis was done by using home-made Perl scripts.
In MM there isn’t the description about DNA seq bioinformatic analyse.

About the diversity and DNA sequencing: The authors need clarify how they proved the relation between bacterial diversity using the DNA seq and (PFGE)

The quality of figure 5 should be improved.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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