Reply to the reviewer comments:

This works assessed the patterns of the fungiome in children with and without Crohn disease
Specific Comments

1. The authors focus their work and the results arising as changes in the fungal patterns to be predictive of CD. I would interpret their results as showing that there are differences between the fungiome in children with active CD than in control children without CD. The concept of prediction is not shown by these data:

   Reply: The concept of prediction is indicated in the methodology: the last paragraph page 10 states " A linear logistic regression classifier (linearmodel.LogisticRegression) in scikit-learn, Machine Learning in Python [16**], <u>was used to predict CD based on the subject's microbiota</u>**. The accuracy of the classifier was tested by computing the receiver operating characteristic (ROC) curve with 5-fold stratified cross-validation under 100 permutations of the training data partition.."

2. The ABSTRACT has many details: does the abstract fit within the journal word limit? If not, there are many places where the abstract could be shortened

   Reply: The abstract fits well with the Journal guidelines.

3. The INTRODUCTION includes the numbers of the subjects enrolled: these are results and should onl;y be provided in the RESULTS section.

   Reply: I could not find the number of patients enrolled in the INTRODUCTION.

4. The RESULTS section would benefit from subheadings:

   Reply: Done and highlighted in yellow.

5. The RESULTS doesn't mention the details of the control subjects.

   Reply: More details of the control subjects are inserted in the manuscript and highlighted in yellow.

6. Also, were there no diagnoses of ulcerative colitis or IBDU in this group?

   Reply: This is correct. The study population includes only children with Crohn's disease.

7. Mucosal biopsies were used for analyses. Were there any difference between the location of the mucosal biopsies? or were these all grouped together?

   Reply: They were grouped together because of small numbers in each location.

8. While the authors note that it is not possible to scope well children to obtain mucosal biopsies, have the looked at stool patterns in well children (who were not undergoing colonoscopy).

   Reply: The protocol of this study was to use non-IBD controls. Microbiota profile (bacteria and fungi) in stools of healthy Saudi school-age children is another study that is underway.

9. The term "Crohn's children" should not be used (as per standard convention) - this should be replaced with "children with Crohn disease".

   Reply: Thank you for the reminder. This was corrected and highlighted in yellow.

10. The title " Shannon index" for Figure 2 and the title for Figure 3 are not adequate. A full title should be provided, followed by any required legend.

Reply: Done and highlighted in yellow.

11. Table 3 is huge. Does this all need to be provided?

    Reply: True but it was more huge and already truncated to reflect the most interesting fungi.

12. There are many errors of English language, word usage and grammar. These should all be corrected.
    Reply: this is interesting because the manuscript was reviewed by a professional editing company. The certificate was uploaded. In addition, the manuscript was reviewed again by one of the native American coauthors.